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THE FEDERAL RESERVE SYSTEM—ITS PURPOSE AND WORK

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The Integrity of the Federal Reserve System

By A. D. Welton and C. H. Crennan
Editors-in-Charge

THE Federal Reserve System has to do only with commercial banking.[1] Commercial banking has only to do with getting goods from producer to consumer. It operates on the assumption, ordinarily valid, that the sale of goods to the consumer produces funds to discharge whatever obligation has been created.

Investment banking, on the other hand, operates on the assumption that the capital loaned will be repaid out of the earnings its use permits in a specified number of years.

The essence of commercial banking is liquidity of the credit on which it functions. Its credit instruments must be of short maturity. The banks which invest in them undertake to pay on demand and they must have a constant inflow of funds or a means of quickly realizing on their credit instruments. It is necessary, therefore, that the goods against which such credit is granted should be always in process of sale.

Primarily and fundamentally the Reserve System was designed to provide for the credit instruments of commerce an instant sale. It was an attempt to organize not a new lot of banks, but a new banking machine supported by the resources of all its member banks.[2]

The Reserve System is then an organization of banks. The Reserve Banks draw their capital from banks. Banks give them all the business they have, except the government, which is their only other customer. The country has then a banking system composed of banks of various kinds, some chartered by the nation and some by the states, brought into a coöperating organization with the Federal Reserve Banks as the operating mechanism.

Over this operating mechanism of the coöperating organization of banks, the government exercises a general supervision. There are many people who thought the supervising authority should be different, but it isn't and it doesn't matter so long as it is competent and impartial.

The purpose of the Federal Reserve System was to provide for business just what has been provided. There was no purpose and no intention to establish government banks, and none was established. There was no purpose to help or favor operating banks because they needed neither help nor favors. There was a purpose and intention to put the operating, commercial banks in a better position to discharge their duties to business so that business might go on under any and all circumstances, if this could be achieved through an economic use of credit and competent credit machinery.

In relation to business, therefore, the Federal Reserve System is more than a banking system. It is a code for business behavior. It is more than a machine for expanding and contracting credit and currency. It is a means for the orderly and systematic functioning of business credit and,

[1] Permission to national banks to receive savings deposits and to exercise trust company powers does not affect the commercial nature of the Reserve System.

[2] Cf. Article by Professor Kemmerer in this volume.

through reapportionment of this credit, for the stabilization of business.

No comprehensive grasp of the System can be had if, among its attributes, is included that of a remedy for all business and financial ills. It is not. It can never save the day for the insolvent. It is man-made and man-operated. It has and must have limitations. It must not be concluded because it financed the War, that it can go on indefinitely producing rabbits of credit and currency out of an empty hat. It didn't do that even in war. It did give life and credit form to latent and dormant resources. It did make the unliquid at least temporarily liquid. But war demands such performances.

It might have been better if the Reserve System had been called on to do less, and more had been done through other means, the Treasury, for instance. It would have been as well for the country and better for the System. Had this course been followed the Reserve Banks would have avoided much harsh criticism for displaying their limitations, once war pressure was removed. Many suggestions for changing the System would never have been made. It would not have been expected to bring to realization so many fatuous dreams.

As an operating banking mechanism the System need not, however, be taken for what it is. Changes in the machinery may be made if the fundamental structure is not impaired. Any banking system is a thing of growth. If, in its final form, it shows that wisdom has been gained from experience and skill from practice, it begins to approximate general needs. The Reserve System is an evolution out of more than a century of hard and bitter, experience made harder and more bitter by experiments. Its mechanism is, therefore, of moment only as it permits the application of principles of demonstrated soundness. Its fundaments are vital, not only because they attest that old fallacies have been dismissed, but also because they have been proved under the test of practice.

Probably, in any organization applying rules of conduct, there is a degree of fluidity. Some measure of change is always possible even when not always desirable. But change for the sake of change is not progress or improvement. On the other hand, there is advantage in holding to fixed practice. It is not difficult to test the quality of any amendment proposed to the Federal Reserve Act. It is necessary only to get the fundamental purposes in mind. Anything out of accord with them may instantly be dismissed.

But a great banking system cannot grow and develop out of itself. Dealing with such an intangible as credit and so nebulous a quality as confidence, the attitude of the public must be reckoned with. So susceptible are banks generally to public opinion that the banker subconsciously, almost, considers that as a factor to be used in all his calculations. In any event the public is a factor in the future development of the Reserve System, as Paul M. Warburg points out elsewhere in this volume. If the public is dismissed because even a meager popular understanding of the intricacies of banking is beyond hope, the business man, from whom more may be expected, stands forth as a grim spectre.

The public, most assuredly, feels and does not analyze. The business man may be controlled by emotion rather than reason. The more certain the operations of the Reserve Banks, therefore, the better they will come to be understood. Eventually, although it may be only a hope, the public will

come to understand up to the point of having confidence.

Thus the public is an important factor in the development of the Federal Reserve System. There must be a growth without the banks as well as within them. The public mind must become attuned to them.

For the people the Reserve System is a precious thing. If it is to fulfill its work and its mission, they must view it with confidence. Its integrity is to be guarded with as much jealousy as the Constitution itself. The jealousy must be inculcated into the popular mind. The attainment of such a state is taken to be desirable. If it is, the prospect of its realization will be in constant jeopardy unless members of Congress can be induced to abandon the idea that the Reserve Act is subject to tinkering at the behest of any amateur banker.

KNOWLEDGE OF BANKING HISTORY HELPS TO PUBLIC UNDERSTANDING

Under the interpretation of the Federal Reserve System given above, its growth, improvement and development to the maximum of satisfaction and efficiency can be attained only if its fundamental purposes are understood. The forces without the System must contribute a share in this growth and development. These outside forces are the business men and the public generally.

There can be no adequate understanding or appreciation of the System unless there is a general familiarity with what preceded it. To this end the first section of this volume is given over to an historical review. The first article sketches the history of banking from 1791, when the First Bank of the United States was organized, down through the panic of 1907.[3]

Even cursory reading of these events will indicate the influence that old experiments and controversies exerted on the makers of the Reserve Act and the form and content of the law. In the struggle over note issues and redemption of bank notes will be found the causes for the demand that Federal Reserve notes be made "obligations of the United States." (The workings of the national bank system will explain the development of reserve banking and the need for elasticity of both credit and currency, and so on.)

In his article on "The Studies of the National Monetary Commission," Professor Weston illuminates the defects of the old banking system and shows how they were studied in relation to other systems and the probable needs of modern business for adequate banking service.

These needs found expression in the organization of the National Citizens' League for the Promotion of a Sound Banking System. The story of the organization of that movement is told by Mr. Harry A. Wheeler, who participated in it and who was also one of the organizers and the first President of the Chamber of Commerce of the United States.

Through the workings of the National Citizens' League, later supplemented by work of the Chamber of Commerce, the business men and the business organizations of the country were bound together. A community of thought on banking methods and services was thus brought about and translated into definite purpose.

To get this result—a first step toward legislation—demanded an elaborate educational campaign. Success in this venture was made more difficult because of the many schemes for monetary and banking reform conceived and promoted by modern John Laws. These enthusiasts, often seeing

[3] By B. H. Beckhart.

in banking the means of attaining universal happiness, found no other weapon than legislative compulsion or government operation of banks. Dismissing the exploded theories, it need only be said that the guaranty of bank deposits was the measure of reform being pressed with vigor at that time. It had many advocates in Congress. However, the educational campaign was persistently prosecuted and was successful to the extent necessary in bringing attention to sound economics in banking reform as against the pursuit of emotional rainbows.

In his article on "The Federal Reserve Act in Congress," Dr. H. Parker Willis gives an intimate recital of facts, many of which have not previously been published. As expert for the House Committee on Banking and Currency, Dr. Willis was familiar with every step in the development of the bill before it was in the Committee for discussion and subsequently. The political factor is here disclosed as it came forward to influence what was an economic product. The degree of interest of the Administration in the measure, the pressure placed on Congress and the suggestions from the Treasury and other departments are made clear.

In this phase of the development, distinction must be made between the administrative and the economic provisions. Control of the System was always a subject of contention. The decentralizing of credit and curbing of the supposed power of Wall Street and the "Money Trust" were always matters of political concern. The tendency toward government control of the operating banks themselves had to be guarded against. Over the economic provisions, there was less trouble. There was no disagreement of moment in this respect, but provisions strictly economic were often under pressure because of their relation to control in execution. Thus elasticity of note issue was confused with distribution of credit and would have been sacrificed or impaired if help for the farmer could have been secured thereby. One illustration of the confusion of economics and politics will suffice.

In an economic sense, rediscounting for profit was at that time unthinkable. The maturity of paper offered for rediscount at the proposed banks was of incidental importance. Commercial banks could not consider paper of anything but short maturity and it was equally clear that paper for rediscount would not be offered to the Reserve Bank by the discounting bank on the day of discount. But dozens of congressmen could not or would not understand that the farmer could have no direct dealing with the Reserve Bank. Hours of discussion in the Senate were given over to the maturity of agricultural paper. Senators who saw in the Reserve Act only a new way of settling the farmer's eternal credit problem, would have willingly destroyed the commercial character of the Reserve Banks on the chance of settling that question. The time agricultural paper for rediscount may run was increased to ninety days. This maturity would have been of no importance if the rediscount rates had ever been scientifically adjusted and is of little importance anyway. In August, 1921, the average maturity of rediscounted paper was 15.76 days. In September it was 17.22 days. In the Minneapolis Bank it was 42.06 days and in Boston 7.74 days. If maturities had not been mentioned in the Act, the result would probably have been the same.

The House bill as recommended by Chairman Glass' Committee was the real bill, as Dr. Willis points out.

Senator Owen had a different bill which he was induced, eventually, to abandon. There was also a bill fathered by the Treasury providing for a central government bank with the Treasury's gold as the capital. The fact that the gold belonged to the holders of the certificates issued against it, was thought to be insignificant. The advocates of this plan floundered about in it for some time until the President himself summarily suppressed it.

Dr. Willis shows clearly that the Glass bill was the Administration's bill. After all other proposals had been discussed, and mechanical changes were made—notably that providing for retirement of the bond-secured currency—the Act as passed was substantially the bill as it came from the House Committee.

The true purposes of the Federal Reserve Act will be found in the discussions and reports of the Banking and Currency Committee of the House, of which Carter Glass was chairman.

The beginning of the European War brought an almost instant business dislocation. Fear of panic was allayed by the summary closing of the stock exchanges. A currency famine was supposed to be imminent. The members of the Federal Reserve Board had been appointed about this time—August 9, 1914—but the time for opening the new Reserve Banks could not even be predicted.

In September the dormant National Currency Associations were awakened. These had been formed in many districts under the provisions of the Aldrich-Vreeland Act, passed after the panic of 1907. Emergency currency was issued to these Associations and met whatever stress there was, as told in Mr. Dodge's article.[4]

[4] "The Aldrich-Vreeland Emergency Currency."

Aside from the useful service of providing currency and thereby sustaining confidence, the operation of this law was effective to prove its incapacity to meet anything more than a passing strain. There were many men —bankers included—who thought that the demand for banking reform would be completely met by this law or any law which would permit the turning of bank assets into currency. It was a bit of good fortune that there was a demonstration to show that banking efficiency was a reserve and not a currency problem. It eliminated forever from consideration a half-hearted remedy.

EARLY PROBLEMS AND OPERATIONS OF THE FEDERAL RESERVE BOARD AND BANKS

The Federal Reserve Board and the Banks were organized without much difficulty. The Organization Committee toured the country to gather information and hear the arguments of the various civic and banking committees selected to advance the claims of the many cities which thought themselves entitled to selection as the homes of the Reserve Banks. There were many contenders for these honors and there was some bitterness. Fixing the boundary lines of the districts also caused contention. Political "pull" was exerted to influence the committee from without and political prejudice was working within. But these matters were of minor importance compared to the Organization Committee's interpretation of the provision as to the number of Banks. They decided that twelve should be immediately established, and not eight, to be increased to twelve later if experience showed twelve to be necessary.

Undoubtedly the Committee felt the pressure keenly. Southern cities were very ambitious and very influential. But, so far as politics was concerned,

its full force was not manifested until the matter of organizing the Reserve districts came before the Reserve Board for review in 1915.

The Federal Reserve Act (Section 2) says, "The determination of said organization committee shall not be subject to review except by the Federal Reserve Board when organized" and "the districts thus created may be adjusted and new districts may from time to time be created by the Federal Reserve Board, not to exceed twelve in all."

The Board seemed to think that provision mandatory. It was, therefore, in the performance of what they considered a duty that they turned to a study of district boundaries and the location of Reserve Banks. In several instances changes in boundaries were made, but when a discussion of the possible strengthening of the System by combining some of the districts (without closing any offices already established) was begun, political power began immediately to work.

The then Governor of the Board and the two ex-officio members combined to prevent any change of the kind under discussion. The ex-officio members —the Secretary of the Treasury and Comptroller of the Currency whose action as members of the Organization Committee was to be reviewed—and the Governor were a minority of the Reserve Board. But, over the signature of the Governor and without the authority or knowledge of the majority of the Board, they asked the President to transmit to the Attorney-General a request for an opinion defining the Reserve Board's powers of review.

The opinion was turned out over Saturday and Sunday, which may be considered unusual dispatch. When the Board met again it was faced with the Administrations' interpretation of the law and the interpretation was that the Board had no power to review the determination of the Organization Committee in a manner that might affect the existence of any of the twelve Reserve Banks already established.

The point to be made is that the integrity of the Reserve System is of indifferent consequence in the face of political exigency. Perhaps just such a thing will not happen again but this is the second instance in which appeal was made to the Attorney-General to give legal support to a plan politically desired.

The fear of future political assaults on the integrity of the Reserve System is so well founded in experience that Mr. Warburg is wholly justified in his conclusion that the people must develop a jealous regard for their banking machinery if they wish it to endure. Mr. Warburg, in his article, is apparently less concerned with the past than with the future. Recent experiences indicate the correctness of his views and the basis for his fear of political encroachment. He worked so faithfully and effectively to gain and hold for the Reserve Banks what they have that anything he says has particular and peculiar significance.

Once the Reserve Board was in action, there was the usual clamor for jobs from eager politicians but it was mostly clamor. The positions to be filled were hedged about by qualifications that could not be met by those without banking experience. The position of Reserve agent attracted the avid attention of the politically faithful. The duties of this position were not clearly defined. At first sight it seemed to offer attractions of ease and afford a quiet resting place for an agreeable ex-something classed in political slang as a "lame-duck." There were, of course, hundreds of applications for these places and every applicant was supported by heavy political indorsements.

However, the Reserve Board itself was wisely chosen. Efforts to diversify its membership both in equipment and representative character were successful. The Board, charged with the duty of organizing a new banking system at the time the world was beginning the greatest of wars, did not view the task lightly or politically. Bankers were drafted into the service of the Reserve Banks and accepted, often at large sacrifice. Bankers and business men chosen to the directorates of the Reserve Banks were as much in earnest as the Reserve Board. The political pressure was strong enough to bring a lapse here and there, but the general character and business complexion of the official staffs stood up under close inspection. This early proceeding is to be judged only in the light of results obtained and not by the efforts that were made to impose upon Board or Banks the wishes of those who were politically moved. It is a fair inference that, so far as jobs were concerned, political officialdom passed recommendations along in the serene confidence that the banking minds would accept the responsibility of the refusal to concur.

In any event the Banks came into existence as banks and were opened on November 16, 1914. Having buildings, equipment, officers and staffs, they were naturally curious as to what they might do. Could they advertise and go out after business? No provision had been made for such a course. They would get business when their member banks were hard pressed for funds. Humiliation attached to rediscounting. It was regarded as a sign of weakness. Moreover, while the Reserve Banks were open for business, reserve funds were to be turned over to them in installments. The banking system was otherwise running along as before.

There was, however, much to do. In nearly every district leading banks rediscounted paper for the sake of example.[5] The Reserve Board had to study the law, which settled all difficult problems by saying "under such regulations as the Board may prescribe." It must also be remembered that Aldrich-Vreeland emergency currency was in circulation and was to be retired or supplanted by Federal Reserve notes.

Rules were to be made, precedents set and the gathering of traditions begun. Eligible paper had to be defined; at least, a beginning had to be made.[6] Not only banking customs but business habits would have to be remolded and remodelled, if the Reserve Banks were to have anything on which to function. Acceptances were authorized by the Act. They were new to the banking world. The lessons of war were beginning to say that gold would have to be gathered and impounded.[7] The state chartered banks were hostile or, at best, only neutral. It grew rapidly plainer that they would have to be wooed and won. The law made it mandatory that the clearing and collection of checks and drafts be undertaken. A first step in this direction threw the country banks that were members of the System into spasms of anger and fear. It made the state banks glad that they were beyond such meddling.

The Gold Settlement Fund came as an ingenious means to economy and convenience for member banks. It was a first notable step in what the Reserve Banks could do—something that would be helpful, speedy and cheap. The plan was worked out by the Reserve Board

[5] "Early Functioning of the Federal Reserve System."

[6] "Eligibility for Discount" by Charles L. Powell.

[7] *See* "Preparation for War and the Liberty Loans" by J. H. Case.

in conjunction with experts called from member banks. It was simple and easy and established itself so quickly in favor that it was almost as quickly forgotten as a service. It has always worked perfectly and stands now as a real achievement.[8] It is a service no less to business than to banks.

The story of the winning of the state banks and of par collections is told in the paper by Mr. Pierre Jay, Chairman of the Board of the Federal Reserve Bank of New York. Mr. Jay was called to that position from the presidency of a state bank. It is needless to say that his sympathetic understanding of state bank problems, his patience and persistence found opportunity for display in dealing with those institutions. But the national banks within the System were more rebellious than the state banks without it. They would not be mollified and they were impervious to argument. They nearly disrupted the American Bankers Association. They forced Congress to consider amendment of the Act and missed winning completely by a narrow margin. They went to law about it. It is possible still to make exchange charges and they are made, but the "par collection" competition is too strong. In the face of all the obstacles the Reserve Banks are now the great instruments for check collections and they will have competition in this field only from banks of great reach, capable of maintaining the necessary connections and facilities.

However, the War, not the wooing, brought the state banks into the System—not all of them, of course, but a number in point of resources quite great enough to give the Reserve System the necessary universality—if there is any such thing as a degree.

[8] "The Evolution of the Gold Settlement Fund" by George J. Seay.

The development of the relations of Reserve Banks to their members and with one another immediately became a serious problem once the Reserve Banks were in operation. How this was done and what was and is being done, is told by Mr. Gidney. The Reserve Banks can never supplant "correspondent" banks. There are too many services the latter render, too many personal and long-standing connections, but the Reserve Banks have made great progress and have brought their depositors to a realization that they are customers and will be treated as such. The development of close relationships among the Reserve Banks and their officials has also been as important as it is interesting. Unity demanded it, but systematic effort was essential to its achievement.

There will always be non-member banks because banking is often specialized and men have notions of independence. The mutual savings banks of the East are not eligible to membership. They have no capital stock. The laws have been changed in one or two states to permit them to invest a part of their funds in "commercial paper" and acceptances, but their investments are not supposed to be liquid, and they are far removed from commercial banking.

Probably there will always be private bankers with freedom to operate within that borderland where investment and commercial banking meet and divide, or on both sides of it. But the Reserve System, as now formed of Reserve Banks, national banks, state banks and foreign trade banks, is sufficiently inclusive and strong to permit the statement that it is as nearly universal as necessary. There is nothing on the horizon, or nearer, to indicate that it will diminish instead of grow.

Amendments to the Reserve Act have been fairly numerous, but generally they have been made to meet conditions that could not be foreseen or to make operating conditions easier or simpler. It is good fortune as well as good judgment that there has yet been no success in perverting the provisions of the Act. Congress has so far yielded to the guidance of the Reserve Board and, when there was threat of unsound doctrine, Carter Glass, as representative and senator, has been found on guard. The first thrust at the integrity of the System by the War Finance Corporation has been parried. Even the admission that that Corporation is now doing commendable work and meeting an urgent need, does not justify dismissal of the hope that its life and the emergency which revived it, will both end as scheduled on July 1, 1922.

Amendments to the Act are discussed in Mr. Walter S. Logan's paper where their bearing and trend may be learned. In this connection it is not amiss to say that bankers have contributed loyally to the effectiveness of the Reserve Banks' operations. If they fought lustily, through one or two groups, against par collections, they coöperated zealously by surrendering their gold to the Reserve Banks. Without the War the impounding of gold would have been exceedingly difficult; as it was, it required effort. But good teaching and good leadership carried through, in the closing months of 1917, a plan whose success stood as a milestone in the progress of the Reserve System.

Branches of the Federal Reserve Banks were established and opened in the interest of service to business. The jealousies engendered by the selection of Reserve Bank cities and the making of reserve districts were wiped out in this way, but the branch banks have proved the necessity for their existence. Governor Fancher, of the Cleveland Reserve Bank tells the story.[9] There are, however, variations in the operation of branches. In the far West the geographical extent of the San Francisco district demanded a larger independence in management for the branches than in the East, but telegraphic communication is always close:

The assumption of the functions of the Independent Treasury—see Professor Wildman's article—came belatedly. It was probably as well that it was deferred by politics and war. When it did come, the banks were experienced and ready. So far as the public was aware the subtreasuries slipped their moorings and drifted into the sea of oblivion with no one's knowing or caring.

EXPANSION, CONTRACTION AND THE DISCOUNT RATE—VITAL PROBLEMS

It was thought advisable by the editors of this volume to have as wide a discussion as possible of "Expansion and Contraction." Involved with this question is the influence of the rediscount rate on business activity and, therefore, the relation of the rediscount rate to business and to the expansion and contraction of money and credit.

The Reserve Board is charged with many duties. The Reserve Banks function in many ways. But no question goes more to the vitals of the entire scheme than the adjustment of the discount rate of the Reserve Banks. Whatever else they may do and however successful they may be in the discharge of collateral and subsidiary duties, around the discount rate and its making cluster the factors that bear

[9] "The Establishment and Scope of Branches of Federal Reserve Banks."

directly on the success or failure of the Reserve Banks as aids to commercial business or to the member banks which act in response to business and react to its advantage.

The relation of the Reserve Banks' discount rate to and influence on business has by no means been determined. The factors to be considered in determining the rate are pretty well settled, but their relation to one another and the relative importance of each is still an open question. In seven years of operation the determining of the discount rate has been influenced by extraneous or distracting conditions. At first when the Banks were new, it was of no importance. When war pressed, other factors received scant attention. After the Armistice the belief that the unexampled prosperity would endure, supported the Treasury's needs for more financing. When, finally, something had to be done to avert a crash, it was found that no genuine experience in adjusting the discount rate to influence business had been had. The first increase of the rate to "slow up" business came as an arbitrary decree based on a conception drawn from British experience. That was in January, 1920. Business did not slow up. It went on, undoubtedly despite the higher rate, despite the warning, but, because of what? Possibly because of its own momentum. Expansion increased. It was many gloomy months after the rate was first increased before the peak of either credit or currency expansion was reached. In the meantime business generally declined to believe that the end of war prosperity had come or that the revival and continuation of it was not around the corner. The Reserve Board and the rates of the Reserve Banks were mentioned only to be damned. All kinds of allegations, charges, proposals and remedies were made. In the end the rate was popularly charged with undoing business—for lack of a better reason.

All this was a new experience with the discount rate. It was a valuable experience because it was a first lesson in the time relationship between business activity and the Reserve Bank's discount rate which, to whatever extent it affects business activity, can do it only through the influence it exerts on the rates charged by member banks.

In the articles on these questions, a wide range of experience, supplemented by opinion and study, was sought. Bankers, Reserve Bank officials, merchants, economists were all invited to express themselves. Governor Harding, of the Reserve Board, has stated the problem as it is before the Board. Mr. John H. Rich, Chairman of the Board of the Minneapolis Reserve Bank, has furthered the discussion with views and experiences in that extensive and interesting Reserve district. Dr. A. C. Miller of the Reserve Board, has brought to bear on it a mind singularly free from prejudice and admirably equipped to ferret out and interpret facts. Mr. John V. Farwell, from the merchant's interested and detached position, gives helpful suggestions and clear exposition. Mr. J. B. Forgan, dean of bankers, and tried in experience by long service on the Federal Advisory Council, and Mr. George M. Reynolds, from a terraced height of banking leadership fairly won, make contributions which are supplemented by those of Professor E. M. Patterson of the University of Pennsylvania and Dean Chester A. Phillips, of the University of Iowa, theorists in the field of economics but with practical bents and adept in the use of scientific method.

Needless to say, these men are not entirely in agreement. But close reading of their contributions will disclose

that they are far from hopelessly apart. Any divergence of statement is not over what the discount policy has been, but rather in emphasis as to what it should be in the future.

The problem of the time relationship between the rediscount rate and business activity seems vital in the discussion. Of the efficacy of the rediscount rate to influence business there is little room for question. Recent experience, however, indicates a considerable lapse between the time of fixing the rate and the time when business feels and responds to it. On January 21, 1920, the first increase in discount rate to six per cent was made. This rate was maintained until the following June when the rate for Chicago and New York was increased to seven per cent. This rate was maintained for a year. In June, 1921, the lowering began.

The point made by Mr. Reynolds is that business is not immediately affected by the rates charged by commercial banks. The rediscount rate can affect business activity only through its effect on the rates of commercial banks. But banking, as a result rather than a cause of business activity, can react only after business has made commitments which it is bound to carry through if it can. If, under the present relationship between the rediscount rate and business activity, the rate is to be adjusted effectively, adjustment must be made in anticipation of a business activity which may need restraint or of an inactivity which may need stimulation. Such an adjustment might be precarious and it would likely be uncertain. It is venturesome to say that the rates charged for loans by member banks would be a better guide in seeking a basis for the rediscount rate, for those rates have variations, as do the rates charged for standard "commercial paper."

The condition outlined shows the strength of the position of those who say the rediscount rate should always be higher than, say, the rate for standard commercial paper charged by member banks. However, there are strong arguments why the rediscount rate should sometimes be lower. At present the lower rate is giving many hard pressed banks in the farming sections a needed breathing spell. A lower rate's influence in stimulating business may also be problematical unless the member banks adjust their rates to it as quickly as possible and with considerable speed in any event.

It is not that these statements create a dilemma but they seem to justify no other conclusion than that further experience in influencing the rates of member banks, if not further experiment, is necessary before it may be said that wisdom is justified of her children.

IMPORTANCE OF THE "OPEN MARKET"

If operation of the Federal Reserve Banks, under stable conditions of business, is to be seasonal and cyclical, as many of the contributors to this volume seem to believe, the further development of open-market operations will be in order. It so happens that the Reserve Banks, early in their careers, found war a wonderful accelerator. War made them busy and prosperous. Henceforth they will operate under changed conditions. Not that there will not be continuous business for the Reserve Banks, but they will not be carrying peak loads twelve months in the year. Their operations in the open market will be more important under the new conditions than in the past. In this field they may find it possible to exert an influence which will make for the stabilization of money rates.

Mr. Agger tells of the development and position of the open market. From what has been achieved we may get an idea that here is a field for cultivation, with success reacting to demonstrate another and large service the Reserve Banks may render business. The law made provision for such conduct by the Reserve Banks and its importance must be kept in mind.

Misconceptions of the System

Under the stress of financial difficulties incident to war and its aftermath the Reserve Banks came in for a full measure of criticism. It was to be expected, and it is not surprising, that a portion of the criticism was hostile as well as adverse. Professor Patterson, in his discussion of contraction and expansion, gives a very clear elucidation of Reserve Bank operations in their relation to government financing, foreign business and conditions and commercial banking. In these operations will be found such basis as exists for real criticism. The article might well be read with that also in mind.

In his review of the "Popular and Unpopular Activities of the Federal Reserve Board and the Federal Reserve Banks," Dr. Scott goes more particularly into these criticisms, the reasons for them and the shallowness of most of them, while Governor McDougal of the Reserve Bank of Chicago, gives a striking illustration of the lean foundation on which rest the allegations of discrimination against the agricultural districts.

It is not enough to state what the Federal Reserve System is designed to do, if the fundaments of that System are to be understood. Current misconceptions must be cleared away. The prevalence of erroneous ideas compels such procedure.

A wide-spread notion prevails, even among bankers, that the Federal Reserve Banks are government banks. They are bankers' banks. This fact is written into the Federal Reserve Act.[10]

It is implied in the provisions of that instrument.[11] It is not only recognized by economists,[12] but also indorsed by operating officers of Reserve Banks.[13] No Federal Reserve Bank stock is held by the Federal government. The government possesses its regulatory power because the System is freighted with a public interest. The government has an interest in Reserve Bank profits only through a franchise tax. The Federal Reserve Banks are subject to taxation like other private corporations. To be sure, a minority of the directors of Reserve Banks are appointed by the Federal Reserve Board and members of that Board are government appointees exercising supervisory powers in the public interest. Moreover, Federal Reserve Banks do act as fiscal agents, and in other ways, for the government's convenience. Nevertheless, Federal Reserve Banks are not government banks. They are bankers' banks designed to aid business by facilitating commercial transactions. The fact that the Reserve Banks are not government banks destroys the ground work for assumptions: (1) That the System can produce general "prosperity," and (2) that it should be dominated by government.

Under the stimulation of war the facilities of the Reserve Act for expansion became an engine of inflation. They cannot be made an engine of "pros-

[10] *See* the Act and Professor Kemmerer's paper in this volume.

[11] Cf. "The Reserve Act in its Implicit Meaning."

[12] *See* Professor Phillips' article, for example.

[13] Cf. "Relations of Reserve Banks to Member Banks and Inter-Relations of Federal Reserve Banks."

perity." Neither deft nor awkward political manipulation can turn the Reserve System from its strictly economic purpose. It was not designed to salvage insolvents. It cannot create credit out of nothing. While commercial banks can control the flow of commercial credit and thus affect the currents of the productive processes, business creates that credit which banks, even the Reserve Banks, apportion. Business impels; banking controls the drives,—after a time. If there *must* be a causal relationship between business and banking, business causes banking. There is actually a functional relationship. Business gives rise to banking and banking reacts on business. Neither commercial banks nor Reserve Banks can create credit and thus create "prosperity."

One of the facts that doubtless has obscured thinking about the fundamental play of commercial banking is this one, that the Reserve Banks have handled government issues, rediscounted paper secured by government obligations and otherwise performed war functions for the Federal government. They have been functioning, in no small measure, on *other* than commercial credits. This was not their original purpose. Government promises to pay should not be the chief grist taken to the Reserve Bank mill. But as a result of war operations, the assumption that Reserve Banks can "manufacture" credit out of nothing seems to find justification with those who have not seen the underlying sources of the promises to pay on which the Reserve Banks have been functioning. Business, not banking, creates what is called "prosperity."

An instance of government domination of the Federal Reserve System can be found in the control of the rediscount rates by the rate on government bonds.[14] This control was no doubt bred of war's necessities. The War is over. But no end has come to political pressure on the Reserve System. That pressure seems now to come through Congress, or a section thereof, rather than through the Administration. It is suggestive, if not legally accurate, to say that the Federal Reserve Board can exercise those powers expressly granted or necessarily and fairly resulting therefrom, while the Reserve Banks hold residual powers. "Less government in business" can find a starting point in the Reserve System. Government supervision is very different from political manipulation. These bankers' banks should be unhampered by politics.

A current misconception that is giving way is the notion of dead-level uniformity of policy and practice among the Reserve Banks. The Federal Reserve System meets the necessities of American geography and history in providing regional banks with a centralized supervision. This fact is attested by many of the contributors to this volume.[15] Presumably each Reserve Bank will adapt its policy and practice to the hard and particular facts of the business situation in its district.[16] Where differences in procedure are necessary, they must and will be allowed by the Federal Reserve Board, just as differentials in discount rates are "permitted" between districts that are dissimilar. The Reserve Board will play its part of leadership by functioning on *common* matters of policy and practice without constraining the directors of the various banks in matters of

[14] *See* Governor Harding's statement in the article, "Rediscount Rates, Bank Rates and Business Activity."

[15] *See*, for instance, the articles by B. H. Beckhart and John H. Rich.

[16] *See* the paper by H. Parker Willis in this volume.

justifiable difference. Thus will the System best perform its service in facilitating commerce. Arbitrary control, political interference and dead-level uniformity will destroy, not maintain, the integrity of the Federal Reserve System.

THE AVOIDANCE OF INVESTMENT OPERATIONS BY RESERVE BANKS

Investment banking should have no place in the operations of Federal Reserve Banks. Their reason for being is to aid commercial banking. Investment operations can be avoided by confining the paper eligible for discount at the Reserve Banks to commercial paper.[17]

Should the Federal Reserve Banks perform such agricultural credit functions as are now being developed by the War Finance Corporation and should they be "adapted" to such functions? The answer to this question will not only emphasize the distinction between commercial and investment banking—in what may be urged as a border-line case—but will also illustrate the need of confining eligible paper to that which evidences a movement of goods from producer to consumer and is self-liquidating.

The original purpose of the War Finance Corporation is of no present moment. The essential purpose of Section 24 of the War Finance Corporation Act, under which the Corporation is now operating, is to give bankers and farmers time in which to pay their obligations. Banks in various agricultural communities have made loans for "agricultural purposes" which cannot be repaid at maturity out of the proceeds of this year's crop. Some of these banks are themselves having difficulty in meeting their bills payable. This situation is too well known to need elaboration. The War Finance Corporation Act expressly permits banks with "frozen" agricultural credits to apply for advances from the Corporation for six months or a year, with a renewal privilege which may give the obligation a total life of three years. By getting time in which to retire its bills payable, the bank is in a position to give farmer borrowers time in which to make a new crop, or two if necessary, and thus clean up their obligations. The Bank's obligation must be secured by collateral which will insure ultimate payment, but time is given for payment. In short, the Corporation is functioning in the way of carrying the burden of agricultural loans that are slow but should ultimately be paid.

To the extent that the Corporation gets funds into the agricultural sections where frozen agricultural credits still prevail, the operations of the Corporation will no doubt be helpful to banks in those districts and indirectly to the farmer borrowers and the country in general. Whether Section 24 of the War Finance Corporation Act is a sound politico-economic measure need not now be debated. It is a fact. Bankers and economists have few illusions as to the probable extent or nature of its operations, but about one point there can be no doubt, namely, that this giving of time to bankers and indirectly to farmers puts the operations of the Corporation in the class of investment rather than commercial banking. If the Federal Reserve Banks were to carry loans for three years, they would be doing an investment banking business. It is the purpose of the Federal Reserve Act to deal in self-liquidating paper. The Reserve Act might conceivably be amended to

[17] The term *commercial paper*, unless in quotes in this article, means commercial paper as defined in the Federal Reserve Act and rulings of the Federal Reserve Board, and expressly includes agricultural paper. In the case of agricultural paper, however, the maturity of the paper is the essential point in giving it eligibility.

permit the Reserve Banks to perform such long time banking operations as are now entrusted to the War Finance Corporation, but such amendment would be a blow to the integrity of the Federal Reserve System as a commercial banking mechanism.

Should the War Finance Corporation so extend its operations in granting agricultural credits that its capital is exhausted, the Corporation may issue debentures to secure additional funds. The Corporation is empowered by the Act to have advances to banks outstanding at any one time to the amount of a billion dollars. The capital stock of the Corporation, which is owned by the Federal government, is five hundred million dollars. Should the Corporation issue its debentures, these promises to pay must be considered investment paper. They may be used to secure rediscounts with the Federal Reserve Banks. Should they be so used, they will be in the same position as government obligations which are used to secure rediscounts. The propriety of making loans and issuing Federal Reserve notes on the basis of paper "collateraled" by investment securities is a question that may well be raised in considering the integrity of the Reserve System as a commercial banking institution.

Government bonds and debentures of the War Finance Corporation are promises to pay. They are not in themselves evidences of a movement of goods from producer to consumer. They are not self-liquidating as is commercial paper. The legal permission to secure rediscounts with investment paper is a deviation from the original purpose of the Federal Reserve Act. It is true that the Reserve Act makes express provision for rediscounts secured by government obligations.[18] But it is also true that had the framers of the Federal Reserve Act anticipated the World War, the proviso clause in Section 13 of the Reserve Act, which permits rediscounts to be secured by government obligations, would probably not have been passed.[19] And certainly there was sufficient experience with this proviso clause of Section 13, as to its potency for inflation, to have warned against the amendment of the Reserve Act so as to permit the War Finance Corporation's debentures to be used to secure rediscounts. Section 24 of the War Finance Corporation Act was not approved until August 24, 1921.

While government obligations are so extensively held by individuals and business concerns, it is perhaps impracticable to amend Section 13 of the Federal Reserve Act so as to prevent the use of government obligations to secure rediscounts and the issuance of Federal Reserve notes on the security of those obligations. Until the war bonds of the government find a final resting place with investors—which may mean until refunding plans are put into operation—it would probably be impracticable to prevent a member bank's offering the note of a business man for rediscount which is secured by government bonds. Until that time it may be impossible to have Federal Reserve notes issued only in response to commercial needs, evidenced by the offering of commercial paper for rediscount. In the perfecting of the Reserve Act, Section 13 might well be changed, on the chance of a recurrence of very large government demands. There will be no valid excuse for permitting the rediscounting of notes secured by the debentures of the War Finance Corporation should that Corporation function extensively enough to issue its debentures. Of course, it might be

[18] See Section 13 of the Federal Reserve Act.

[19] See paper entitled, "The Reserve Act in its Implicit Meaning."

difficult to sell such debentures without this feature.

The avoidance of investment operations by Reserve Banks will be difficult so long as Congress, or any group of congressmen, can force amendment of the Federal Reserve Act to take from the Federal Reserve Board its power to define eligible paper under the Act as it now stands. In the spirit of the Act the resources of the Reserve Banks are not to be used for withholding crops from the market to secure higher prices. Commercial paper involves the moving of goods to the market, not withholding therefrom in order to insert a price peg or even to secure "more orderly marketing." Measures to admit irrigation and development bonds as paper for the Reserve Banks to function on might conceivably be passed by Congress. But no matter how great the need of particular agricultural districts, or how desirable various measures of relief, it seems clear that the definition of eligible paper should be restricted to commercial paper unless there is a general and well considered intent to depart from the commercial character of the Federal Reserve System.

There may or may not be need of specialized banking machinery to take care of the long time financial requirements of farmers, due to recurrent crop failures or price slumps, as well as their need for long time funds in bringing cattle to market. But in any event that need would have to be determined on the basis of experience that is more than transitory or that arises from a world-wide emergency, caused by the distortions of war. But the fact that these needs exist is not a sufficient reason to destroy the integrity of the commercial banking system that has been established. They rather point the way to the provision of other facilities, if necessary. To destroy the line between commercial and long-time banking, that was not easily established, is to permit just such a situation as now obtains in many country banks. They have slow assets with which to meet quick liabilities. It is as impossible to add investment banking to commercial banking and get security as it is to add apples to oranges and get peaches. And it must not be forgot that the slow obligations of farmer borrowers and agricultural banks can be traced in part to land speculation and inflated land values.

Relation of the Reserve System to International Finance

The Federal Reserve Act permitted the extension of banking operations into the foreign field. Under this authorization American banks branched out in foreign territory extensively and not always profitably. However costly the experience with foreign banking, it is probably safe to say that banks managed by those who are experienced in foreign trade and foreign banking will in the future find sufficient latitude for profitable operation under the Reserve Act.

The Federal Reserve Act was amended by the Edge law to permit an extension of foreign banking facilities through the establishment of new foreign banking corporations in which commercial banks were expressly permitted to own stock. This fact that commercial banks could hold the stock of Edge law corporations is sufficient reason for the Reserve Board's being given supervisory control. Moreover, Edge law corporations were designed to finance imports and exports, but especially to aid the movement of goods from American producers to foreign consumers. They were designed to do a foreign commercial banking business. The Edge law merely extended the provisions of the Reserve Act that had

previously permitted foreign banking. Since the banking business of Edge law corporations is largely commercial in character, the Edge law is not an attempt to graft onto the Federal Reserve System investment features that would have destroyed its integrity as a commercial banking system.

Whether Edge law corporations were or are desirable from the standpoint of practicality is really beside the point. The Reserve Act was extended by the Edge law to put the Federal Reserve System into more intimate touch with international finance. It is merely a matter of record that "rest in peace," in proper Latin phraseology, has been written over the mammoth corporation proposed to be operated under the Edge law.

Dreamer's dreams of international banks, which would restore mint pars of exchange and otherwise work out the difficulties of international finance, can be dismissed with scant consideration. They do, however, contain a warning. The capital of one such bank was to be composed largely of the promises to pay of "solvent foreign governments." The test of solvency was prompt payment of external obligations and the taking of steps towards disarmament. Foreign bonds, even of such "solvent governments," are scarcely to be considered banking capital. It is difficult, also, to see how the operations of such a bank would rectify foreign exchange when any adjustment depends so largely on measures taken by European nations themselves—such as deflation of their currencies and balancing of their budgets—to bring the purchasing power of their moneys more nearly into alignment with the purchasing power of American money. Exchange rates today are on a purchasing power parity. However fatuous such projects, they are conceived by those holding responsible legislative positions and it is not improbable that somehow, if a law were passed to establish such an international bank, that bank would get itself tied up with the Federal Reserve System. It is against such projects that the Federal Reserve System must be safeguarded by an alert and vigilant public opinion which allows no deviation from its commercial character.

Though the condition of business in the United States is affected by the play of world-wide economic and political forces and the Federal Reserve System is affected by the condition of business, that System touches the international financial structure immediately at one point, through its control of gold. How the Federal Reserve Board impounded gold is told in Mr. Case's article. The Reserve Board's control of the gold of the United States is now complete. Certain it is, also, that the flow of gold into the United States shortly after the outbreak of the War, but particularly since September, 1920, has resulted in such redistribution of the world's stock of monetary gold as to give the United States—the Federal Reserve Board—control of some 40 per cent of that stock.

In this connection the article of Dr. Sprague may be read with profit. There is within the Reserve System, as operated, an inherent power for expansion. The manner in which gold is handled is of the greatest importance and Dr. Sprague has indicated the dangers to be guarded against in the future as well as those which have not been met effectively in the past.

PURPOSE OF THE VOLUME

The purpose of this volume is naturally to be ascertained from the reading of the various articles contributed. Books have been written on the Reserve System. Some of them have given its

purposes and some have been devoted to its operations and operating mechanism. The editors assumed, however, that heretofore no opportunity has been offered to bring together in one volume the authoritative statements from those who were directly interested in framing and formulating the Act and were, therefore, familiar with its purposes; from those who were and are actively connected with the operation of the Reserve Banks and therefore competent to interpret their conduct, and from those who directly and indirectly make use of the Banks or are keenly interested to study the progress of the System.

Thus we have in this volume of *The Annals* the Reserve System as contemplated by its framers, as operated by those in charge, and as observed by those in a position to interpret the operations in relation to the purpose. In any event these three forces were sought and have responded. The relationship between purpose and operation is set forth and the limitations as well as the scope of the System have been shown.

It is pertinent to add that sight was never lost of the fact that the Federal Reserve System is not generally understood. It is unfortunate that it is distinctly misunderstood. If this volume is of any assistance in clearing up the misunderstandings and giving a better conception of the work and the mission of the Reserve Banks, the editors will feel fully rewarded. They owe everything to the contributors who have responded so capably and generously to their requests, often, it may be said, despite of engagements and the pressing demands of their own businesses. No editors were ever more fortunate in securing coöperation from contributors.

It is only an editorial hope that the volume may meet approval. It was fairly intended to produce a useful and practical work. Whether it does or does not perform a useful service, we feel justified in appending the message for the book suggested by the governor of a Reserve Bank: "It will not be easy reading; it may not be agreeable reading, but I think it mighty important that every business man should read it."

Outline of Banking History

From the First Bank of the United States Through the Panic of 1907

By B. H. Beckhart
Columbia University

THE United States was particularly fortunate in having as its first Secretary of the Treasury a veritable genius, whose program of fiscal reform quickly placed the new republic on a sound financial basis. As an essential part of his program, Hamilton urged the establishment of a National Bank in a report to Congress, dated December 13, 1790. Since the economic significance of banks was then but crudely understood, Hamilton, in this now famous document, first indicated the numerous advantages resulting from banking in general and from a National Bank in particular, taking occasion to dispel some of the current erroneous ideas on the subject.[1] After showing that no one of the three banking institutions[2] then in existence could be suitably employed as a National Bank, he laid down in great detail the plan for the new institution.[3] The act chartering the bank modelled upon this plan was signed by the President on February 25, 1791.[4]

The entire capital was subscribed within two hours on the day[5] the subscription books were thrown open, and the Bank was ready to begin business on December 12, 1791, with Thomas Willing as president.[6] From the very outset, the Bank proved to be a great success, in providing the country with a sound and elastic currency, in supplying the needed banking facilities, and in preventing any excess issue of state bank notes by having such state notes as were in its possession redeemed. In the performance of its fiscal functions, it transferred government funds and provided a safe depositary for them; it also helped to collect the revenues and provided the bullion needed by the mint in coinage. Further, by 1795 it had loaned the government $6,200,000. In order to procure funds to repay the loan, the government by 1802 had sold all of its stock at a profit of $671,860, and while a shareholder had received $1,101,720 in dividends of 8⅜ per cent.

On April 20, 1808, the stockholders memorialized Congress for a renewal of the charter which expired in 1811. A month later, Albert Gallatin, then Secretary of the Treasury, in a report to Congress enumerated the fiscal services of the Bank and advised that the charter be renewed with a few changes. Nevertheless, the bill to continue the charter was defeated, the

[1] Hamilton's report may be found printed in full in the *American State Papers*—Finance I., pp. 67–76.

[2] The Bank of North America founded in 1781, the Bank of Massachusetts in 1784, and the Bank of New York in 1784.

[3] Hamilton's plan closely followed the charter of the Bank of England as it existed at that time.

[4] The act provided for a capital of $10,000,000, of which one-fifth was to be subscribed by the government. The administration was placed in the hands of twenty-five directors elected annually by the shareholders. Branches were to be established where the directors saw fit. The circulation was not to exceed the capital. Statements of condition might be called for but not oftener than once a week by the Treasury Department.

[5] July 4th, 1791, at Philadelphia.

[6] Formerly, president of the Bank of North America.

opponents charging that the Bank was a "money trust" controlled by foreigners,[7] a tool in the hands of the Federalists, and that the act chartering the bank was unconstitutional—so the First United States Bank went out of existence on March 3, 1811.[8]

Financial Chaos, 1811–1816

It was a most unfortunate time for the country, on the verge of a war with England, to be deprived of the services of the Bank. State banks sprang up on every hand to take its place. Their number increased from 88 in 1811 to 246 in 1816 and their circulation grew from 22.7 million dollars in 1811 to 100 millions six years later.[9] Such a rapid inflation of the currency resulted naturally in the depreciation of bank notes in terms of gold, amounting at the maximum to 23 per cent in Baltimore, and 16 per cent in Philadelphia and New York.[10]

The revenues of the government, consisting largely of tariff duties, were for the most part collected in this depreciated currency, while it was necessary for the nation to make large disbursements of funds in New England where specie payments had been maintained. By reason of this condition, it has been estimated that the government lost $5,000,000 from 1814 to 1817. Further, without the assistance of the Bank, the government had difficulty in selling its bonds (even when offered below par), and was forced to borrow sums from the state banks and to issue some 37 million dollars of "Treasury notes" which "ultimately degenerated into a kind of currency."[11] Writing in 1831, Gallatin stated that had the Bank been rechartered, the suspension might have been prevented and the state banks would have been restrained within proper bounds.

The Second Bank of the United States

As early as October 14, 1814, Secretary Dallas,[12] in a report submitted to Congress, called attention to the need for a National Bank, emphasizing the fact that such a bank could restore the depreciated currency to a gold parity and that in its fiscal relations with the Treasury would be of incalculable assistance. After seven unsuccessful attempts within two years, the charter of the Second Bank, closely resembling that of the First, was passed by Congress and became law on April 10, 1816.[13] Through an agreement with

[7] Though three-fourths of the stock was held abroad, the foreign shareholders exerted little control, as they were not allowed to vote through proxies.

[8] By 1834 the process of liquidating the assets had been completed, the shareholders receiving in all $434 for each $400 share. The assets of the parent bank in Philadelphia were purchased by Stephen A. Girard, which was reopened on May 12, 1812, as "Girard's Bank."

[9] This increase was due to two factors: (1) the suspension of specie payments everywhere during August of 1814 excepting in New England; and (2) to the withdrawal of the restraining influence of the Bank.

[10] The specie was either driven abroad or into the New England States.

[11] Willis, H. P., *American Banking*. 1918, p. 209.

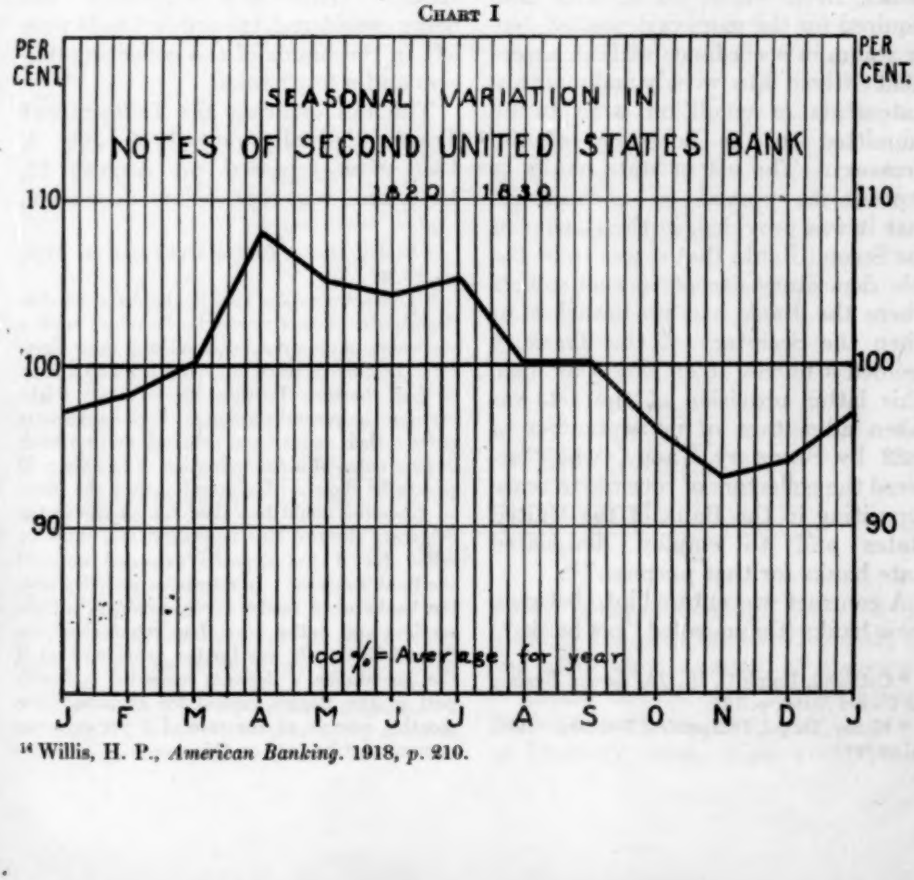
[12] Alexander J. Dallas from Pennsylvania, appointed Secretary of the Treasury, October 6, 1812.

[13] The act provided for a capital of $35,000,000, of which the government subscribed one-fifth. There were to be twenty-five directors, twenty of whom were to be elected annually by the shareholders and five appointed by the government. Branches were to be established wherever the Bank thought necessary, managed by from seven to thirteen directors appointed by the parent bank. The circulation was not to exceed the capital. Deposits of public funds were to be made in the Bank unless the Secretary of the Treasury should otherwise direct. The Bank was required to pay the government a bonus of $1,500,000 and to transfer public funds without charge. Weekly statements of condition might be called for and Congress was given the right to inspect the books of the Bank.

the state banks in the larger towns, the resumption of specie payments was brought about (nominally at least) by February 20, 1817, thus realizing the first purpose of the Bank. Due partly to governmental pressure and partly to a lack of banking training, the directors, at first, extended loans and rapidly increased the circulation, a policy which resulted in a heavy loss to the Bank and in the retirement of William Jones as president in January of 1819. Langdon Cheves, chosen as his successor, immediately inaugurated a policy of retrenchment and deflation. Under his management and later under that of Nicholas Biddle, the Bank became "the most powerful and best managed financial institution the country had ever seen."[14] Its notes, circulating from Montreal to Mexico City, were safe and elastic. In transferring and disbursing government funds, in furnishing domestic exchange, in paying the pensioners of the government, and in acting until 1833 as the sole depositary of public moneys, the Bank was of great service to the whole people.

In his first message to Congress, on December 8, 1829, President Jackson expressed doubts as to the constitutionality of the Bank and the soundness of its notes. The President's hostility subsequently cooled, but when the Whig party at Baltimore in 1831 took the side of the Bank, there ensued a long and bitter struggle which ended in the defeat of the attempt to recharter it. The reasons as given by Professor Catterall for this opposition were the "widespread belief that the Bank was unconstitutional, the hostility of the states, the opposition of the state banks, the rise of democracy,

CHART I



[14] Willis, H. P., *American Banking*. 1918, p. 210.

and the envy and hatred which the poor always feel for the rich."[15]

Upon the failure to recharter the Second Bank, the era of central banks, modelled after those existing in Europe, passed. Banking in America entered upon entirely different lines of development. In the years that followed, the government was to miss keenly the fiscal services of the Bank, and the people, no longer protected by its restraining influence on the note issues of the state banks, suffered severely from the resulting financial chaos.

THE INDEPENDENT TREASURY

From 1791 to 1811, the First Bank was utilized to a large extent as a depositary of government funds. After its charter had expired the government was forced to use the services of state banks, from whom no security was required for the moneys deposited, but by whom in accordance with an agreement entered into, weekly and monthly statements of condition were to be submitted to the Secretary of the Treasury. The use of state banks as depositaries proved so unsuccessful that it was provided, in the charter of the Second Bank, that it was to be the sole depositary except in such places where the Bank had no branches, or when the Secretary of the Treasury deemed it unwise to employ it as such. This latter provision of the act was taken advantage of in September of 1833 by Secretary Taney, who "ordered the collectors of revenue to cease depositing in the Bank of the United States and to employ designated state banks for that purpose."[16]

A contract was entered into between these banks (the so-called "pet banks") and the government, whereby they were required to give security for the funds deposited "whenever the deposits should exceed one-half the bank capital paid in,"[17] or whenever the government deemed it necessary. The banks agreed to perform for the government all of the fiscal services formerly rendered by the Bank of the United States, to render weekly reports, and to submit to examinations when the Secretary thought necessary. On June 23, 1836, an act was passed "to regulate the deposites of the public money" following closely the provisions of Taney's contracts.[18] In his annual message, September, 1837, Van Buren showed that the custody of the public funds by state banks had proved very unsatisfactory and urged that the government take care of its funds itself and require that all dues be paid in specie. While this suggestion was being considered, the public funds were left in the hands of the collecting officers and a few banks.

The bill creating the Independent Treasury, finally passed on July 4, 1840, was repealed on August 13, 1841, and was repassed on August 6,

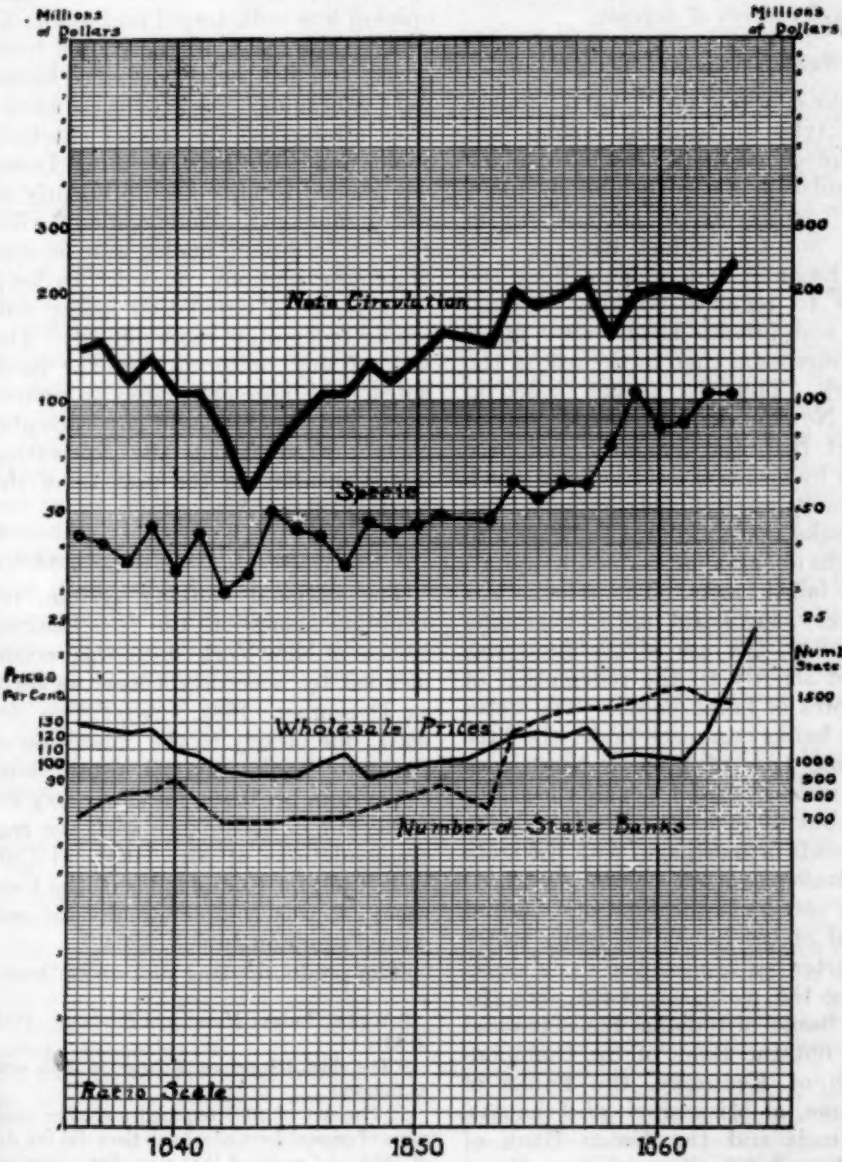
[15] Catterall, Ralph C. H., *The Second Bank of the United States*, p. 164.

[16] Kinley, David, *Independent Treasury*. 1910, pp. 26, 27.

[17] Kinley, David, *Independent Treasury*. 1910, pp. 26, 27.

[18] This act provided that the banks selected as depositaries must furnish the Secretary with a statement of their condition, a list of their directors, the current price of their stock and a copy of their charter. Further, the Secretary might examine the general accounts. Such banks must redeem their notes upon demand, and no bank issuing notes of a denomination of less than $5 was to be chosen. Collateral against the funds so deposited could be called for whenever the Secretary deemed this necessary, and must be called for if the deposits exceeded one-half the Bank's capital. In return for such deposits, the banks must render the government all the services and duties heretofore required of the Second Bank. It was further provided that if the government's deposits exceeded a fourth part of the Bank's capital for at least three months, interest at the rate of 2 per cent per annum must be paid on this excess.

CHART II
Statistics of State Banks, 1836–1863



1846.[19] The act provided that all receivers of public moneys must keep such funds as were received by them safely without loaning, using or depositing them in banks. Further, on and after June 1, 1847, all payments of taxes, duties, etc., to the United States must be made in gold or silver or Treasury notes. New York, Phila-

[19] The repeal of the act in 1840 necessitated a return to the use of state banks as depositaries, until the act was repassed.

delphia, Washington, Charleston, New Orleans and St. Louis were made the principal centers of deposit.

STATE BANKS, 1836–1863

In the course of these years, "almost every type of banking system was attempted, and the result was the accumulation of a great fund of experience"[20] mostly as to the best way in which not to conduct banking. In New England and in New York the efforts to regulate banking through state and private means were much more successful than in the rest of the country. Thus, by an act passed in 1829, New York State endeavored to protect both the depositor and note holder by means of a safety fund which was built up by contributions from the banks and which was to be used to meet the obligations (excluding capital) of the failed banks. This scheme was not very successful until, beginning with 1842, the use of the fund was limited strictly to the redemption of the notes of failed banks. The notes of the banks organized under the Free Banking Law of 1838 in New York State were protected, not by the safety fund, but by deposits of certain specified bonds or mortgages with the state comptroller.

The success of the First and Second United States Banks led many states to charter banks modelled upon these. Among the more successful were the State Banks of Indiana, Louisiana and Ohio, but the Bank of the Commonwealth of Kentucky, the Banks of Alabama, of Mississippi, of Arkansas, of Illinois and the Union Bank of Florida ended in dismal failures, leaving the citizens with millions of dollars of unredeemed notes and worthless deposit accounts.

In the western and southern states, "due to the lack of public regulation, to the want of any uniform system—and to the significant fact that public opinion was both torpid and unintelligent,"[21] the losses to the people from poorly and dishonestly managed banks were enormous. Some of these banks were established by special charters, some, under the Free Banking Laws; few seemed to have been prudently or wisely managed. Some, called "wildcat" or "red-dog" banks, were located in remote sections, in order to keep their notes in circulation longer and render redemption more difficult. The lack of any uniformity in the bank notes, the failure adequately to protect them, and the absence of governmental control were among the motivating factors leading to the passage of the National Bank Act.

THE NATIONAL BANKING SYSTEM

The national banking system, resembling somewhat the free banking system of New York State, was recommended by Secretary Chase as early as December, 1861. After two defeats, due largely to the opposition of the state banks, the bill establishing the system became a law February 25, 1863; but in accordance with the recommendations of Mr. Hugh McCulloch, the first Comptroller of the Currency, it was completely revised and passed again on June 3, 1864.[22]

The predominating motive in Secre-

[20] Willis, H. P., *American Banking*, 1918, *p*. 212.

[21] White, Horace, *Money and Banking*. 1914, *p*. 331.

[22] The chief differences in these two bills were as follows:

1. The Act of 1863 required a smaller minimum of capital for a new bank than did the Act of 1864, and required that a smaller proportion be paid in before beginning business, and allowed a longer time for the payment of the remainder.

2. The Act of 1863 permitted loans on real as well as personal security.

3. The prohibition of issuing notes of a denomination less than $5 took place at once in the former act.

4. By the former act all national banks were

tary Chase's mind for the passage of the act was the establishment of a uniform currency. On January 1, 1862, there were in the United States, 1,496 banks issuing some 7,000 different kinds of circulating notes, "based on a great variety of securities, of different qualities and quantities,"[23] and some based on no security at all. The framers of the Act not only wished to rid the country of such conditions as these, but it was felt by many also that the issues of state bank notes were frequently redundant, were subjected to violent expansions and contractions, and were unequally distributed among the various states.[24]

The increased demand for bonds, which such a system would create, was to Secretary Chase a motive of secondary importance.[25] Additional advantages of the system, of course, were that such banks could act as depositaries of government funds, float loans, stimulate patriotism, and, because of being a national system, prevent future rebellions.

By the Act of 1864 the capital of the national banks was proportioned to the population as follows:

	Capital
Cities with a population of 6,000 or less	$50,000
Cities with a population of from 6,000 to 50,000	100,000
Cities with a population of 50,000 and above	200,000

of which 50 per cent was to be paid in cash before commencing business and the remainder within five months at a rate not less than 10 per cent per month.[26]

Each national bank was required to buy government registered bonds to an amount not less than $30,000 or less than one-third of the capital stock paid in. When such bonds had been deposited with the Treasurer of the United States, the national bank would be entitled to receive notes up to 90 per cent of the par or market value of the bonds whichever was the lower, but no bank was permitted to issue an amount of notes greater than its paid-in capital. Thus the circulation could at no time exceed the paid-in capital of all the banks, and in addition an absolute maximum of $300,000,000 was placed on the note issues. The notes were to be receivable at par in payment of all dues to the United States except for duties on imports, and to be paid out at par for all the debts of the United States except interest on the public debt, and in redemption of the national currency.[27]

It was further provided that national banks in the reserve cities must make arrangements to redeem their currency in New York City, and, simi-

required to maintain a reserve of 25 per cent against notes and deposits.

5. The Act of 1864 makes more complete provision for the conversion of state banks into national associations.

[23] Dewey, D. R., *Financial History of the United States*. 1918, *p*. 321.

[24] Chart II, brings out the first two points in a striking fashion.

[25] As a matter of fact, at the time of Lee's surrender, the bonds bought by the national banks to secure their circulation were less than 4 per cent of the total bonds floated by the government during the war.

[26] The Act made an error in not proportioning capital to the bank's liabilities instead of to the population of the town in which the bank happened to be located. The requirement that the capital be paid in cash was an effort to stop the vicious practice begun at the time the First Bank was chartered of allowing the shareholders to contribute their part of the capital in their own discounted notes.

[27] Inasmuch as the Loan Acts of March 3, 1863 and March 3, 1864, provided that both principal and interest be paid in coin, and the Loan Acts of February 25, 1862, June 30, 1864 and March 3, 1865, provided for the payment of the interest in coin, in order to help sustain the public credit, it was necessary, therefore, as specie payments were suspended from 1862 to 1879, that the government collect its import duties in gold in order to obtain a supply which could be used as required by the above acts.

larly, national banks in country towns must redeem their notes at some bank located in a reserve city.[28]

By an act passed on March 3, 1865, $150,000,000 of the national bank notes were to be apportioned among the national banks in the several states according to the respective populations, while the remainder was to be proportioned by the Secretary of the Treasury "having due regard to the existing banking capital, resources, and business of such States, Districts, and Territories."

State bank notes were forced out of circulation by a provision in the Revenue Act of March 3, 1865, levying a 10 per cent annual tax on the notes paid out after July 1, 1866.[29]

That the entrance of state banks into the system was slow at first, was due, according to Mr. McCulloch, to the fear on their part that the national banking system might be a repetition of the free banking system in its worst aspects. Up to November 25, 1864, only 168 state banks had entered the system, but with the retirement of the state bank notes in sight, only 244 remained out by the end of 1868, and 1,643 were members of the national banking system. An amendment to the National Bank Act passed on June 20, 1874, did away with the lawful money reserve which was formerly required to be held against the circulation, provided for the 5 per cent redemption fund, provided that hereafter banks would have to redeem their notes only at their own counters or at the Treasury Department, and also provided that a bank which wished to retire its circulation might withdraw the bonds deposited with the Treasurer of the United States, provided that lawful money to an equal amount be deposited to redeem the circulation still outstanding; but in no case should the amount of bonds on deposit for circulation be reduced below $50,000.[30] By the Resumption Act of January 14, 1875, the provisions in the former acts regarding the aggregate amount of national bank notes in circulation and their distribution were repealed.

From 1882, when the national bank notes in circulation touched the highest figure up to that time, 361 million dollars, the amount outstanding declined rapidly until in 1891 there were only 172 million dollars in circulation, and of this amount more than 50 millions were secured by lawful money. Naturally one would expect a bank's circulation to increase as the population grew and the nation's resources were developed, but it must be remembered that these bank notes based on government bonds were alone of their kind in the world, and as the yield on government bonds[31] was decreasing

[28] New York was the only central reserve city, whereas the reserve cities were St. Louis, Louisville, Chicago, Detroit, Milwaukee, New Orleans, Cincinnati, Cleveland, Pittsburg, Baltimore, Philadelphia, Boston, Albany, Leavenworth, San Francisco, Washington City, and later, Charleston and Richmond.

Banks in New York City were to keep on hand a 25 per cent lawful money reserve against both notes and deposits, while banks in the reserve cities were to keep a 25 per cent reserve but one-half of this might be deposited with a New York City bank. Banks in other towns must keep a reserve equal to 15 per cent, three-fifths of which could be kept on deposit with a bank in a New York or in any reserve city.

[29] State bank notes made their last appearance in the Treasury reports on July 1, 1876, when the circulation was $1,047,335.

[30] By the Act of July 12, 1882, banks with a capital of $150,000 or less were permitted to withdraw bonds, which they had deposited against their circulation, down to one-fourth of their capital, provided that they deposit enough lawful money to retire the notes not covered by bonds, but not more than $3,000,000 of National Bank notes were to be so retired in any one month. All bond requirements were repealed by the act of June 21, 1917.

[31] By reason of the steadily rising prices of the bonds.

throughout this period, it was no longer as profitable for the banks to take out notes, as the so-called double-profit had declined. From 1891 to 1899, the amount of national bank notes increased, due to the increased yield on government bonds, and to special demands for money during the panic of 1893.

The Gold Standard Act of 1900

This act derives its name from the fact that it provided that the dollar, consisting of twenty-five and eight-tenths grains of gold, nine-tenths fine, should be the standard unit of value, and all other forms of money should be maintained at a parity of value with the standard.[32]

The Act also allowed national banks with as small a capitalization as $25,000 to be formed in towns of 3,000 inhabitants or less.[33] This led to a rapid increase in the number of national banks from 3,583 in 1899 to 4,165 in 1901.

Though the notes to be issued by a national bank were at no time to exceed its paid-in capital, it was provided that they could be issued hereafter up to the full market or par value of the bonds deposited, whichever was the lower, instead of only up to 90 per cent of such value. The refunding of the 5 per cent bonds maturing in 1904, the 4 per cent maturing in 1907, and the 3 per cent maturing in 1908, representing a total amount of 839 million dollars, into 2 per cent bonds maturing in 1930, was provided. One purpose of this measure was to provide a basis for the bond-secured national bank notes by postponing the maturity of a large part of the public debt.[34] The tax on the notes issued remained at 1 per cent per annum if the bonds bore more than 2 per cent interest, but if they bore 2 per cent interest or less, this tax was reduced to one-half of 1 per cent.

Under the stimulus of the Act, especially by reason of allowing national banks to issue notes up to the par value of the bonds, and by reason of the increased yield of government bonds, the amount of notes in circulation increased rapidly from 332 million dollars in 1900 to 609 millions in 1907.

The Gold Standard Act of 1900 was not a constructive piece of legislation, as it did little else than modify slightly the technical details in the organization and operation of the national banks, and made no attempt to remedy any of the basic defects of our banking system.

The Panic of 1907

Beginning with 1896, prices in the various gold standard nations, which had been falling for nearly a generation, began to turn upward. This change was due to an increase in the production of gold and use of money substitutes, and to the wasteful exploitation of the world's natural resources. The rise in the price level led to such a stimulation of industry that until 1907, aside from a local crisis in Germany in 1900 and the "rich man's panic" of 1903 in America, the period was one of general prosper-

[32] This act simply affirmed the gold standard which had really been established in the act of 1873 which demonetized the silver dollar.

[33] As established by the Act, the capital requirements were:

	Capital
In towns of less than 3,000	$25,000
In towns of 3,000 to 6,000	50,000
In towns of 6,000 to 50,000	100,000
In towns with more than 50,000 people	200,000

[34] Horace White has estimated that the loss to the government on additional interest paid by extending the maturity of these bonds amounted to $244 millions — a tremendous price to pay for an increase in circulation up to 1907 of only $277 millions of dollars. *Money and Banking*, Horace White. 1914, *p*. 406.

ity. This expansion in business and the resulting increase in speculation intensified the demand for capital. As the demand could not be met from the current savings of the people, commercial banks began to make larger and larger extensions of credit, a policy which resulted in progressively lower reserves and forced the banks to raise discount rates and curtail extensions of credit. This retrenchment was accompanied by a diminishing purchasing power on the part of the great mass of consumers, for wages lagged behind prices in the upward movement, forcing the sale of products at sacrifice prices. This condition checked the rise in the price level and brought on a period of depression throughout the world.

In America, as in the nations of Europe, prices, wages and interest rates rose one after the other. While this differential between prices and the cost of production lasted, the speculator optimistically capitalized the future earnings of industry, and the prices of stocks soared, reaching a peak in 1906. Toward the end of that year it was apparent that the demand for capital was such that borrowers had difficulty in being accommodated even though bank credits were strained to the limit. In January and February of 1907 large blocks of securities had to be sold to repay the loans previously procured from the London market through the drawing of finance bills. Prices of stocks fell steadily and crashed in March. After a slight recovery the market began to fall again in August and was still falling when the panic occurred.

In addition to the general causes of the world crisis of 1907, there were elements of weakness in the American banking system, reflected chiefly in the New York money market, which caused the crisis here to degenerate into a panic. One of the most significant facts in the development of American banking from 1896 to 1907 was the rapid growth of state banks and trust companies. State banks increased particularly throughout the West and South as the requirements of the state

TABLE A—GROWTH OF STATE BANKS AND TRUST COMPANIES, 1896, 1902, 1907

STATE BANKS

Year	Number	Capital (Millions)	Individual Deposits (Millions)	Cash Holdings (Millions)	Proportion of Cash to Deposits
1896	3,978	310.8	695.7	101.0	14.5%
1902	5,433	388.3	1,698.2	178.6	10.5
1907	10,352	664.2	3,068.6	254.0	8.3

TRUST COMPANIES

Year	Number	Capital (Millions)	Individual Deposits (Millions)	Cash Holdings (Millions)	Proportion of Cash to Deposits (National Bank Notes Included)
1896	257	173.5	586.5	26.8	4.6%
1902	636	329.6	1,525.9	31.9	2.1
1907	1,485	645.4	2,061.6	101.7	4.9

banking laws were less strict there than those of the National Bank Act. The greatest growth in trust companies occurred in the East, as there they were not subject to the same strict requirements as were state and national banks. The growth of these two types of banking institutions is shown in Table A on the preceding page.

As the proportion of cash to the individual deposits of state banks and trust companies, amounting to 8.3 per cent and 4.9 per cent respectively, in 1907, was woefully inadequate to meet a heavy drain, they carried balances with national banks which they planned to withdraw in time of an emergency. On August 22, 1907, they had 196.3 million dollars on deposit with the national banks in New York City. Though these deposits would surely be withdrawn during a crisis, the national banks in the performance of their functions as reserve agents, "did not build up reserves any larger than they would have carried had they been received from that class of conservative individuals who habitually maintain large balances with their banks."[35] Furthermore the national banks in New York City held a considerable porportion of the deposited reserves of the national banks located in the interior, amounting on August 22 to 213.8 million dollars.[36] Against the certainty of having the bankers' balances withdrawn during a crisis, the New York banks maintained the ridiculously low cash reserve of 224 million dollars in 1906 (though this was slightly above the legal minimum) against total deposits (including those made by the government) of 1,162 millions, of which at least a half consisted of bankers' balances. That they would be unable to meet heavy withdrawals during a crisis, a time when banks ought to increase their loans to save the solvent but temporarily embarrassed borrower, is obvious.

Moreover, the Secretary of Treasury, Leslie M. Shaw, encouraged other unsound banking practices by a series of innovations which he introduced from 1902 to 1907. Among the more radical of his changes, was the exemption of national banks from the maintenance of a cash reserve against government deposits, the acceptance of other than United States bonds as securities for government deposits, the depositing of government funds where money seemed tight, and the artificial stimulation of gold imports.

The cause directly leading to the panic was the announcement, on October 21, 1907, by the National Bank of Commerce of New York that it would no longer clear for the Knickerbocker Trust Company, whose management was under suspicion. This action precipitated a run on the Trust Company, which was forced to suspend the following day after paying out eight million dollars. Immediately, the alarm spread throughout the land, a wild scramble for money ensued, banks and individuals hastened to withdraw their funds from the New York City banks, and the panic was on. The New York City banks being ill prepared to meet these heavy withdrawals were forced to suspend cash payments on October 26. The rest of the country immediately followed their example.

The Defects in the American Banking System as Revealed in the Panic of 1907

One of the most serious of these defects was the rigidity and immobility of the reserves. The proportion of reserves to be held by national banks against their deposits were definitely

[35] Sprague, O. M. W., *History of Crises Under the National Banking System.* 1910, p. 226.
[36] See footnote 37.

fixed by statute.[37] In compliance with the provisions of the Act, on August 22, 1907, national banks held cash and deposited reserves as shown in Table B.

The provision allowing a certain proportion of the reserves to consist of balances with other banks was intended to provide the interior banks with exchange to sell on New York and other important commercial centers. However praiseworthy this intention might be, the provision led to a pyramiding of reserves, so that our credit structure represented an inverted pyramid with a relatively small cash apex in New York City. In fact, of the reserves deposited with national banks in central reserve cities, more than two-thirds were held by the banks in New York City. In August of 1907 they held cash reserves against these bankers' balances amounting to 26.5 per cent, and, as was customary, had loaned a large part of the remainder to brokers, as call loans, which they felt were the most liquid form, in the absence of a general discount market. The capacity of the interior banks to meet their depositors' demands during a panic depended in part upon their ability to withdraw the funds which they had deposited with their New York reserve agent. But the New York banks were unable to meet heavy drains of cash, due to the insufficiency of their reserves, and the unliquid character of call loans, secured by stocks and bonds, during a panic when the prices of securities were tumbling. Far from being able to repay his loans, the broker needed additional help from bankers at such a time.[38]

Realizing that it might be impossible, during a panic, to withdraw their deposited funds, national banks placed great dependence upon their cash reserves to meet the emergency. But these, scattered as they were in 1907 among 6,429 banks, were ineffective in allaying the panic. When the financial storm broke each little bank endeavored to strengthen and to guard its own reserve against withdrawals, as there was no established agency

TABLE B—CASH AND DEPOSITED RESERVES OF NATIONAL BANKS, AUGUST 22, 1907

	Number of Banks	Deposits (millions)	Cash Reserves (millions)	Deposited Reserves (millions)
Central Reserve Cities	60	$1,205.5	$315.5	....
Reserve Cities........	306	1,423.4	196.6	$165.7
Others...............	6,178	2,627.2	216.8	226.7
Total..............	6,544	$5,256.1	$728.9	$392.4

Percentage of cash reserves against deposits = 13.87%.

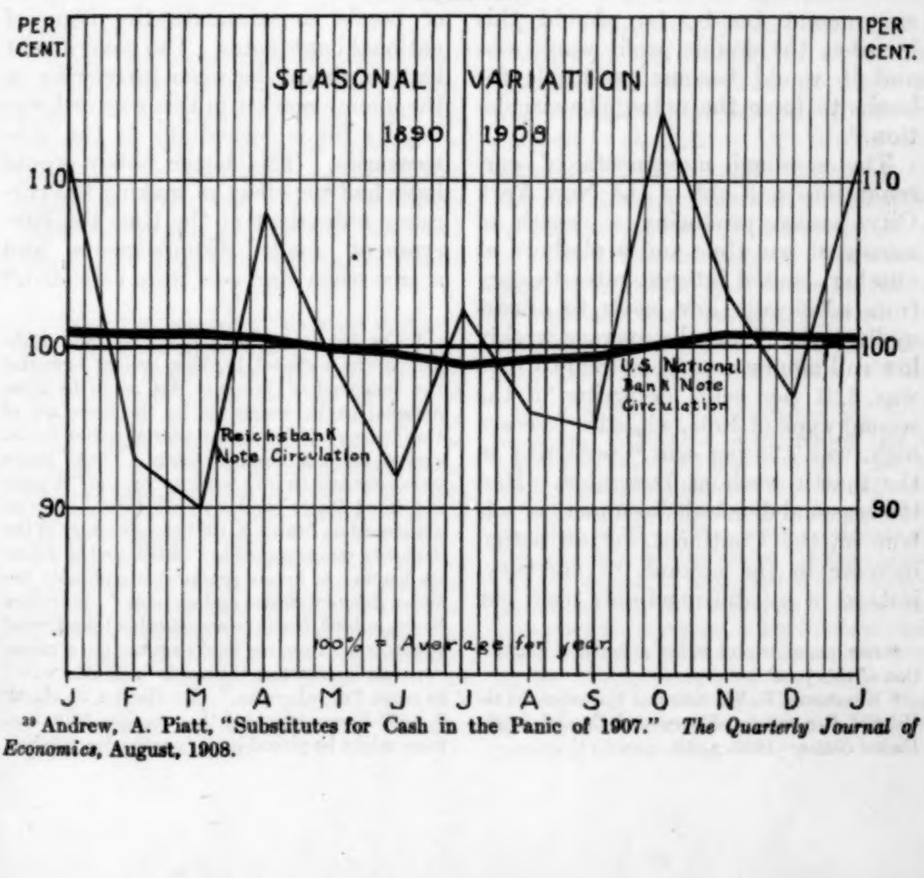
[37] The provisions were, that national banks in New York City, St. Louis and Chicago (known as the central reserve cities) must keep a lawful money reserve of 25 per cent against their deposits; that national banks in some forty-seven other large towns (reserve cities) must maintain a 25 per cent reserve but one-half of this might be deposited with a national bank in a central reserve city; all other national banks were to maintain a 15 per cent reserve but three-fifths of this might be deposited with national banks in reserve or central reserve cities.

[38] Prof. Sprague finds that out of a total loan increase by the national banks in New York City between August 22 and December 3, 1907 of sixty-three million dollars, call loans account for fifty-four million dollars.—*History of Crises Under the National Banking System*, p. 301.

which would grant it aid through the extension of loans or the discounting of its paper. Once the reserve had fallen to the legal minimum, the bank was not expected to extend any further accommodation to its customers. The cash reserves of national banks, though large in the aggregate, were so scattered, hoarded and immobile as to be ineffective during a time of financial difficulty.

Another defect in our banking system revealed in 1907, as in every other panic, was the inelasticity of the national bank notes. An elastic currency should expand to meet seasonal and cyclical demands for money, and when these demands have been satisfied, should contract. Cyclical demands occur at the time of a crisis, for then business confidence is at a low ebb and money, rather than credit instruments, is demanded as a medium of exchange. The suspension of specie payments, following the failure of the Knickerbocker Trust Company resulted in a premium on currency ranging as high as 4 per cent. The Honorable A. Piatt Andrew has estimated that to meet the demands for money, 334 million dollars of currency substitutes were issued, including clearing house loan certificates and checks, cashiers' checks and manufacturers' pay checks.[39] Our bank notes did not begin to increase until the first part of November and by the first of the year had increased by only fifty-four million dollars. The reason is found in the time it took to buy the necessary bonds and to comply with the governmental red tape.

CHART III



[39] Andrew, A. Piatt, "Substitutes for Cash in the Panic of 1907." *The Quarterly Journal of Economics*, August, 1908.

Seasonal demands for money arise from periodically recurring needs, such as the demands of the farmers for money each fall to harvest and market their crops. As the national bank notes failed to expand, the interior banks secured much of the money needed by withdrawing their deposits from the New York banks. To the extent that the New York banks met this demand with lawful money, their reserves were lowered, necessitating a contraction of loans and forcing up interest rates. Chart III showing the seasonal variations (with secular and cyclical tendencies removed) in the national bank notes and the notes issued by the Reichsbank, illustrates in a striking fashion the inelasticity of the former.

Such powers of expansion and contraction as the national bank notes possessed, depended upon the yield of government bonds, for should this increase, the double profit would rise and it would become profitable for banks to force the notes into circulation.[40]

The seasonal movements of currency into and out of the New York City banks, producing a dearth of money at one time and a plethora at another, caused interest rates to vary from artificially low levels to abnormally high. Thus the average weekly low call money rate from 1890 to 1908 was 2.31 per cent, occurring in the second week of June, while the average high, was 7.38 per cent,[41] occurring in the fourth week of December. Had the seasonal demands been met, as was true on the Continent, by an actual increase in the amount of currency, instead of by shifting funds from one section to another, and had this currency contracted, once the need was satisfied, interest rates could have been fairly stabilized. Furthermore, due to the immobility of reserves, and the concentration of banking capital in the East, there were considerable sectional disparities in interest rates which could not be eliminated without central reserve banks.

From time to time, the government endeavored to extend relief to the banks in order to counteract the evils in our banking system. The innovations of Secretary Shaw have been noted. Mr. George B. Cortelyou, his successor, continued this policy. After the panic had begun, he transferred to the national banks in New York City (from October 21 to October 31) nearly thirty-eight million dollars to help them meet their withdrawals. Later he offered for sale 150 million dollars of bonds to stimulate the issue of national bank notes. The government had to choose between interfering in the money market in this way or keeping its funds locked up in the subtreasuries. This latter policy would have had the effect of making the currency redundant at the time the government made disbursements and scarce when its taxes were collected.[42]

[40] See pages 8 and 9 for a further illustration of this point.

[41] Kemmerer, E. W., *Seasonal Variations in the Relative Demand for Money and Capital in the United States.*—1910, p. 15.

[42] The Act passed in February 25, 1863 establishing the national banking system amended the Independent Treasury Act so as to allow national banks designated by the Secretary of the Treasury to be depositaries of public funds, except receipts from customs. These banks were required to give security by the "deposit of United States bonds and otherwise." By an act passed on March 3, 1901 the Secretary of the Treasury was expected to "distribute the deposits herein—so far as practicable equitably between different States and sections." Secretary Shaw, in 1903, began to accept other than United States bonds from the banks against government deposits, interpreting the words "and otherwise" to mean "or otherwise." By the Act of March 4, 1907 it was provided that receipts from customs might be placed in designated depositaries.

Of course such policies as introduced by Secretary Shaw were but palliatives for the situation and could not by themselves remedy the defects of our banking system.

EFFORTS AT REFORM

It was imperative that the defects in our currency and banking systems should be remedied, if the nation were to escape the disaster, humiliation and ruin of recurring panics. The members of the American Bankers Association were among the first to realize the necessity for reformation, and endorsed, at a meeting held in Baltimore in 1894, a plan of reform known thereafter as the "Baltimore Plan." This plan proposed that government bonds be eliminated as security for national bank notes, and provided for their issue on much the same conditions that govern the issue of the Canadian bank notes.[43]

About the same time in a report to Congress, Mr. John G. Carlisle, Secretary of the Treasury from 1893 to 1897, proposed a plan of reform resembling in its main outlines the Baltimore Plan, but with the addition that the provisions in the National Bank Act requiring banks to maintain a reserve against deposits be repealed.[44]

On November 18, 1896, a resolution was adopted by the Board of Governors of the Indianapolis Board of Trade inviting representatives from the boards of trade of sixteen middle western cities to assemble at Indianapolis in December of 1896 "for the purpose of considering the advisability of calling a larger conference,—to consider the propriety of creating a non-partisan commission, to which shall be assigned the duty of formulating a plan for the reform of our currency system."[45]

Representatives from the boards of trade and similar commercial bodies of eleven of the cities invited attended this preliminary conference and issued a call for a non-partisan monetary convention of business men to convene at Indianapolis on January 12, 1897. Delegates from twenty-six states and the District of Columbia attended the convention, at which it was unanimously agreed that an executive committee of fifteen be appointed which would endeavor to procure at the next session of Congress legislation for the appointment of a Monetary Commission by the President, to consider the entire question of currency and banking reform. In case this effort failed it was provided that the executive committee should

[43] The "Baltimore plan" proposed that government bonds be eliminated as security for bank notes and provided that each National Bank be allowed to issue notes up to 50 per cent of its paid-up, unimpaired capital subject to a tax of one-half of one per cent per annum on the average amount of notes outstanding, and further that an additional circulation, known as emergency currency, equal to 25 per cent of the bank's paid-up unimpaired capital be allowed subject to a heavier tax. Each bank issuing notes was to contribute an amount to a central guarantee fund equal to 5 per cent of its notes in circulation, from which the notes of failed banks were to be paid. If the fund were not sufficiently large for this, the remainder of the notes were to be redeemed from the assets of the failed bank. A 5 per cent redemption fund was to be maintained as at present.

[44] Carlisle's plan closely followed the Baltimore plan, but differed in this respect that in addition to the 5 per cent guaranty fund, he would require each national bank issuing notes to maintain 30 per cent lawful money reserve, consisting of United States notes including the Treasury notes of 1890, against the notes issued. State banks were to be allowed to issue notes in accordance with these provisions. He also proposed that the provisions in the National Banking Act requiring a bank to maintain reserves against deposits be repealed.

[45] *Report of the Monetary Commission of the Indianapolis Convention, Chicago.*—The University of Chicago Press, 1898. *p.* 5.

select eleven men to make a thorough investigation of the monetary needs of the country. The Commission of Eleven was appointed and held their first meeting on September 22, 1897, in Washington. After a series of conferences lasting through the fall, a preliminary report was adopted on December 17, while the preparation of the final report was entrusted to J. Laurence Laughlin, a member of the Commission. This report was completed by April of 1898. The preliminary report simply states the Commission's plan of reform, while the final report deals in an exhaustive way with the subject of money and banking from a theoretical, historical and statistical standpoint, and is a noteworthy contribution to economics.

After advising that the existing gold standard be maintained the Commission proposed that national banks be allowed to issue notes up to the amount of their paid-up unimpaired capital, exclusive of so much as is invested in real estate. For the first five years after the passage of the proposed measure, the notes issued up to 25 per cent of a bank's capital were to be secured by government bonds, but thereafter the amount of bonds required to be deposited, before notes might be issued, was to be reduced by one-fifth each year. The notes issued in excess of 60 per cent of the capital and not in excess of 80 per cent were to be taxed at the rate of 2 per cent per annum, while those issued in excess of 80 per cent were to be taxed at the rate of 6 per cent per annum. In order to protect the noteholders from loss, each bank was to contribute to a guaranty fund an amount in gold equal to 5 per cent of its circulation, from which the notes of failed banks were to be paid. In case that the fund became impaired, by reason of payments made to redeem the notes, the Comptroller of the Currency was authorized to make an assessment upon all banks in proportion to their circulation. The present 5 per cent gold redemption fund was to continue.

The plan for banking reform included the proposals that the present reserve requirements be maintained against deposits with the exception that one-fourth of the reserves required should be held in coin in the vaults of the bank. The establishment of branch banks was provided for in case the Comptroller of the Currency approved. It was further recommended that the organization of national banks in towns of 4,000 or less with a minimum capital of $25,000 be permitted.

The Commission's proposals would have provided America with a safe and elastic currency, but would not have remedied any of the other defects of our banking system. These could not be removed by a modification of the then existing system, but required the introduction of central reserve banks. The work of the Commission is valuable, not because of its immediate effect upon legislation, but for the reason that it awakened the public conscience to the necessity of banking and monetary reform, and paved the way for the final reformatory measures.

The Studies of the National Monetary Commission

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THE National Monetary Commission had its origin in the financial and banking panic of 1907. That astonishing disturbance and collapse of credit was one of the most unbecoming, if not disgraceful, episodes in our financial history. Popular clamor followed. When the air had cleared it was seen that the trouble was due to the banking system, which, ill-adapted to supply the needs of a progressive industrial nation under normal conditions, was utterly inadequate for the preservation of business equilibrium and the allaying of distrust in times of business accident and unexpected strain.

Dissatisfaction with our banking system began, however, long before the panic of 1907. The banks received a share of the blame for the crises of 1873 and 1893, while during the ten years of intense business activity preceding the panic of 1907, banking reform was a question of almost constant public agitation. This was a period of rapid, indeed almost revolutionary, changes in industrial and commercial organization, but the development of banking seemed to lag behind, owing, it was believed, to the rigid character of the banking laws. The panic of 1907 brought the criticism of the banking system to a climax and the Congress which assembled in December of that year, some weeks after the outbreak of the panic, was flooded with bills designed to reform the monetary and banking systems of the country.

In this aroused state of public opinion some action by Congress was inevitable, but it was soon realized that widely divergent views as to what was needed to correct the evils of the existing situation, conflicting business interests and partisan political aims, would prevent the enactment of any thorough-going measure of reform. The leaders of the dominant party in Congress adopted, therefore, a temporizing policy and secured the passage of a law, commonly known as the Aldrich-Vreeland Act, approved May 30, 1908, providing for the issuance of emergency currency under certain conditions. This act was a makeshift measure and must be regarded as a political rather than a financial expedient. It was passed with but little debate and without previous consideration by the regularly constituted committee of either house of Congress. It was intended to satisfy the urgent public demand for action by Congress and to enable the party in power to say that provision had been made against a recurrence of the troubles that had afflicted the country in the preceding autumn.

THE MONETARY COMMISSION AND ITS DUTIES

But the Aldrich-Vreeland Act also created the National Monetary Commission, to be composed of nine members from the Senate and nine from the House of Representatives, prescribed its authority and duties and made an appropriation to cover the necessary expenses of its work. The work of the Commission is clearly defined in Section 18 of the Act which provides:

> That it shall be the duty of this commission to inquire into and report to Congress at the earliest date practicable, what changes are necessary or desirable in

the monetary system of the United States or in the laws relating to banking and currency. The commission shall have the power, through subcommittee or otherwise, to examine witnesses and to make such investigations and examinations, in this or other countries, of the subjects committed to their charge as they shall deem necessary.

Within a short time after the passage of the law, the National Monetary Commission was organized with Senator Nelson W. Aldrich, of Rhode Island, as chairman and Congressman E. B. Vreeland, of New York, as vice-chairman. The Commission was a purely political body. The law restricted membership to senators and representatives in Congress. All sections of the country, including sixteen different states, were represented in its original composition. The members could hardly be regarded as experts or even students of banking and currency problems and only a few of them had had any legislative experience with such questions. The Commission was, therefore, forced to depend in large measure on outside help in making its inquiry and preparing its recommendations. Almost from the beginning, the work of the Commission was personally directed by Senator Aldrich and was continued for a period of more than three years with some considerable intervals of inactivity.

In order to make the inquiry required by the law and bring together the information that would be needed in formulating legislative proposals, the Commission employed a number of prominent economists, financial editors, bankers and government officials in the United States and foreign countries to prepare monographs, papers and reports on the actual operations of banks and on their separate functions and mutual relations. Members of the Commission visited the leading countries of Europe whose economic conditions were most nearly like our own, and appointed representatives to visit other countries for the purpose of holding personal interviews with the officials of leading institutions concerning their banking organization and their arrangements for dealing with reserves, note issues, commercial paper and other banking problems. The Commission also conducted hearings and made inquiries in different parts of the United States and particularly in a dozen or more of the leading commercial centers of the country for the purpose of getting the opinions of people in different localities and occupations on desirable changes in our banking laws. The discussion of currency and banking problems in the meetings of various learned societies and associations of business men and bankers were also utilized by the Commission as a means of securing expert opinions.

Publications of the Monetary Commission

The results of the studies and investigations carried on by people enlisted in the service of the Commission, and of its own interviews, public hearings and inquiries, together with the report and bill submitted to Congress by the Commission at the conclusion of its work, have been issued as public documents in a series of twenty-three volumes under the general title of *Publications of the National Monetary Commission*. The material in these volumes covers about 14,000 octavo pages and about 1,200 quarto pages, the latter containing chiefly statistical matter. Of the total of over 15,000 pages, about two-thirds, or more than 9,000 pages, deals with banking and related problems in foreign countries. Of the whole mass of information brought together in the

publications only a relatively small part is entirely new. Some of the material included is simply a reprint of previous publications, and a large part of the matter dealing with American conditions consists of books, monographs and reports previously published but revised and brought up to date and republished for the uses of the Commission.

Some of these revisions were, however, of vital importance to the completion of the investigation which the commission had undertaken. This was especially true of the two monographs by Dr. David Kinley on "The Independent Treasury of the United States and its Relations to the Banks of the Country" and "The Use of Credit Instruments in Payments in the United States." The study of Treasury operations left no doubt concerning the need of some new and efficient machinery for handling the government's financial business, while the investigation of the use of credit instruments fixed attention on the tremendously important function of the deposit currency as a means of employing bank credit in the transaction of the business of the country.

Valuable Contributions

Among the most notable of the new contributions to the study of American conditions were the "Seasonal Variations in the Relative Demand for Money and Capital in the United States" by Professor E. W. Kemmerer and the "History of Crises under the National Banking System" by Professor O. M. W. Sprague. The volume by Professor Kemmerer is an elaborate statistical study based on a mass of financial data, such as statements of condition of banks, clearing house returns, movements of money, rates of exchange, monetary circulation, bond prices, etc. The study was not confined to the New York money market alone, but included also the markets of Chicago, St. Louis, New Orleans and San Francisco, to the extent that information was available. While Professor Kemmerer's investigation was the most complete of any ever made in this field, it did not result in any modification of accepted theories of seasonal and other periodic market movements but served rather to confirm them.

Professor Sprague's volume of 484 pages on "The History of Crises under the National Banking System" is an important contribution to our financial literature and the most valuable of the original studies made for the Monetary Commission. It is a careful, critical examination of the results of banking policy and management as developed under the National Bank Act in all the periods of crisis from 1873 to 1907. Professor Sprague describes the nature of the problems that presented themselves from time to time and compares the success of the methods that were evolved to meet them. His final judgment is that "it is impossible to escape the depressing conclusion that the banking situation in 1907 was handled less skilfully and boldly than in 1893, and far less so than in 1873. No new elements of weakness were disclosed, but no real effort was made to overcome difficulties which had been met, with partial success at least, on former occasions." The most important lesson to be drawn from Professor Sprague's study is that banking reform would prove most certain and successful if pursued along the line of the means naturally evolved by our bankers for meeting their problems.

Such an inference is in accordance with our best experience. Probably the most successful banking system we have had in this country was the Suffolk system of the New England

states in the period before the Civil War. This was a plan of banking developed by bankers, slightly aided from time to time in their efforts by the law, to insure efficiency and safety in the employment of bank credit on a basis of circulating notes. If bankers since the Civil War had been free to act in accordance with their experience, and had been reasonably supported by the law, there is no reason to suppose that they could not have developed for the whole country equally efficient and successful methods of insuring safety in the use of bank credit based on deposit currency.

INVESTIGATION OF FOREIGN BANKING SYSTEMS

In the investigation of foreign banking and currency conditions, much more attention was given to England, France and Germany because it was believed that business conditions in these countries were more nearly like our own. Of the 9,000 pages in the publications devoted to material relating to foreign countries, over 6,500 deal with conditions in these three countries alone, and of these pages about 4,500 relate exclusively to Germany. It was the opinion of Senator Aldrich, as well as of some other members of the Commission, that the banking system of Germany was of more interest than any other to the people of the United States because the industrial and commercial interests of the German Empire were very largely of the same character as our own. This German material, like that relating to the United States, consists largely of reprints in English translation of books, reports and papers previously published in German. These reprints include the memorial history of "The Reichsbank, 1876–1900," the "German Imperial Banking Laws," the third German edition of Dr. Jacob Riesser's "The German Great Banks and their Concentration in Connection with the Economic Development of Germany," almost the entire report and proceedings of the "German Bank Inquiry Commission of 1908," a series of articles from the *Frankfürter Zeitung* relating to "The Renewal of the Reichsbank Charter" and a series of "Miscellaneous Articles on German Banking" extracted mainly from the proceedings of the Third German Bankers' Convention. But in spite of the large amount of space given to German material, the publications of the Commission contain no general review of German banking as a whole, an omission which can only be regarded as a defect in the work of the Commission since so much importance was attached to German conditions and experience.

The information relating to English and French conditions is much briefer but also more useful in making a comparative study of American experience. The monographs by Hartley Withers on "The English Banking System" and by R. H. I. Palgrave on the "History of the Separation of the Departments of the Bank of England" are the best of the publications relating to England. Mr. Withers' statement is an illuminating account of the complicated relations of the Bank of England, the joint-stock and private banks, and the accepting houses and discount houses, and the position of all of them in the market.

The most valuable of the publications dealing with French conditions are the "Evolution of Credit and Banks in France from the Founding of the Bank of France to the Present Time" by André Liesse and "The Bank of France in its Relation to National and International Credit."

Some of the best information concerning the operation of the foreign banking systems, and particularly those

of England, France and Germany, is to be found in the reports of the interviews held in the summer of 1908. The replies to questions put to bank officials in these interviews, with respect both to what they said and what they left unsaid, often throw more light on some aspects of the actual working of the foreign systems than anything else published by the Commission. But the information contained in these reports is not so accessible because no attempt was made to analyze and digest it in a systematic manner.

DISCLOSURES AS THE RESULT OF CONTRASTING BANKING SYSTEMS

The things which this extended study of foreign banking conditions emphasizes in contrast with American conditions are:

1. The existence in each country of a central institution, more or less closely related to the government of the country, which serves not only as a government bank but also as a banker's bank and as a bank for the public.

2. The centralization and control of note issue by means of these institutions.

3. The high degree of centralization in general administration and management of reserves in all countries.

The publication of this mass of material relating to foreign banking was one of the most useful services that the National Monetary Commission performed. It made available for our political leaders, banking and financial journalists and the general public, a vast fund of information on banking organization and operation in foreign countries which was formerly known only to expert students of the subject.

It is not easy to estimate the influence which the studies carried on under the direction of the National Monetary Commission had in shaping its conclusions concerning the defects of our banking system and in devising the necessary measures of reform which were finally submitted to Congress in the form of a report and a bill at the beginning of 1912, three and one-half years after the initiation of the Commission's work. A large portion of the publications of the Commission were issued in 1910 before anything definite was known of the plan of reform to be recommended. In January, 1911, Senator Aldrich personally gave out what he described as a "suggested plan of monetary legislation."

In substance this plan was an elaborate central bank scheme to be owned and controlled by the banks of the country with due representation of the government on its official board. This suggested plan does not seem to have been the product of any deliberations of the National Monetary Commission itself, based on the results of the scientific inquiry it had been conducting. No formal meetings of the Commission as an official body were held before the fall of 1911 when a resolution calling for a report from the National Monetary Commission on January 8, following, was introduced in Congress by Senator Cummins of Iowa and adopted.

Although due allowance must be made for the influence of American opinion and European experience, the suggested plan was probably the work of Senator Aldrich, aided by the advice of a few experienced men, among whom Mr. Paul M. Warburg, the New York banker, is commonly reputed to have played an influential part. The proposals made in this plan, which soon came to be spoken of as the Aldrich Plan, were fully discussed for several months in meetings of bankers and business men and in economic,

banking and financial periodicals and newspapers. In October, 1911, the plan was revised and redrafted in the form of a bill and included in the report submitted to Congress on January 8, 1912, as the recommendation of the National Monetary Commission.

Defects in the United States Banking System

The defects in our banking system which are elaborately summarized in the report of the Commission may, for the purposes of this paper, be briefly recapitulated as follows:

1. The existing banking system provides no effective means for coöperation by banks in crises.

2. It admits of no concentration of the banking reserves of the country for use in times of stringency or unusual strain.

3. The banknote circulation fails to respond, through automatic expansion and contraction, to changing needs of business.

4. The existing system provides no effective agency for facilitating exchanges and transfers of funds between different localities and sections of the country.

5. It affords no means of properly regulating the foreign exchanges and controlling the international flow of gold.

6. Interior communities do not have the benefits of ready access to the central money markets.

7. Existing arrangements lead to the congestion of banking resources in large financial centers stimulating speculation when they are accumulating and unsettling the market when they are withdrawn.

8. The accumulation of government funds in other institutions than the banks results in constant disturbance of bank reserves and further unsettling of the market.

To rectify these evils, the bill recommended by the Commission proposed to incorporate the National Reserve Association of the United States, with a capital of $100,000,000 to be subscribed voluntarily by national banks, and also by state banks and trust companies under certain conditions. Subscribing banks in contiguous territory were to be grouped in local associations, while these local associations were to be combined into fifteen district associations covering the entire territory of the United States and serving as branches of the National Association. The central association thus organized was to have authority:

1. To take over the note issuing function of the national banks, basing such note issues ultimately on legal money and first class commercial paper instead of bonds, and further, to have the privilege of issuing additional notes, having the same security, on payment of a graduated tax thereon.

2. To rediscount for national banks first class commercial paper maturing in short periods of time.

3. To transfer funds for national banks between the central association and the branches, and between the branches.

4. To receive and hold deposits of subscribing banks and the government, but no private deposits.

To insure safety in reserve management the National Association was required to hold a cash reserve equal to fifty per cent of its demand liabilities. It was also provided that the association should serve as a depository for public funds and as the fiscal agent of the Federal government. No changes were made in the reserve requirements of national banks except that they could count the notes of the central association as well as their deposits with it as reserves.

Probably no economic measure ever

brought before the Congress of the United States received at the hands of political leaders, students of banking and currency problems, and the general public, such comprehensive study and thorough discussion as this one, but in spite of the great amount of time and labor spent on it and the heavy expense incurred, it had no direct consequences whatever in the way of constructive legislation.

POLITICAL CHANGE AND THE ALDRICH PLAN

By the beginning of 1912 the political situation had completely changed and the recommendations of the Monetary Commission were never brought up in Congress for consideration. Many of the men who had been members of the Commission when it was organized had either retired from public life or had been retired in the elections of 1910. During the discussion of Senator Aldrich's suggested plan, which preceded the formal submission of the Commission's findings and recommendations, much opposition of a general character developed against it, not apparently because of any lack of confidence in the soundness of the measures proposed, but because of a general distrust of the men who were primarily responsible for it, particularly of Senator Aldrich who, as chairman, had controlled and directed all the activities of the Commission. Whether or not it was warranted, there was a widespread belief in the country that Senator Aldrich was too close to some of the great business interests whose purposes, it was believed, were not always in harmony with the highest public welfare. In view of this attitude of the public it was not unnatural that the new party leaders in Congress should decline to look for guidance in the work and findings of the National Monetary Commission.

THE RESERVE ACT AND THE MONETARY COMMISSION'S WORK

The extent to which the framers of the Federal Reserve Act drew upon the work of the National Monetary Commission has been a matter of some interest. At the time the Act was under discussion many people regarded it as nothing but a copy in large part of the Aldrich Plan, but there were no substantial grounds for such a claim, although the two projects were similar in many of their fundamental provisions. In describing the legislative history of the Federal Reserve Act some months after its passage, Dr. H. Parker Willis, who was the expert of the House Banking Currency Committee while the bill was being drafted, makes the following statement concerning its origin:[1]

> The Federal Reserve Act is the product of a lengthy course of development and has grown gradually out of the discussion and analysis of the past twenty years. It is not drawn, even largely, from any single source, but is the product of comparisons, selection and refinement upon the various materials, ideas and data, rendered available throughout a long course of study and agitation. Many bills embodying the same general line of thought that now finds expression in the new act have been offered in Congress.

All of this might be said also, with equal truth, of the Aldrich Plan itself. Certain it is, that the fundamental principles underlying the essential provisions of both measures were well established in European and American banking theory.

The investigations of the National Monetary Commission were limited to the field of banking and bank currency although the scope of the instructions given the Commission by the law would have permitted a wider range

[1] *American Economic Review*, Vol. IV, *p.* 13.

of activities. Many students thought at the time that it was a good opportunity to amend some of the other serious defects in our monetary system. Since the beginning of the Civil War, our money had become the most heterogeneous and complex of any in use by the great nations of the world. Besides the gold basis, it included several different types of fiduciary money in large amounts with complicated machinery for maintaining them at a parity with the standard. A general reform of our banking system and bank currency was regarded by many as furnishing the best opportunity to secure a final solution of the greenback and silver questions, but the National Monetary Commission avoided these issues as did also the framers of the Federal Reserve Act.

CURRENCY COMPLEXITIES PERSIST

Today, it is a serious question whether or not the addition of the Federal Reserve notes to our monetary circulation, without any material change in the amount of national bank notes or the other forms of fiduciary money in use, has not increased the complexity and difficulties of our monetary system without improving its efficiency as an instrument of economic welfare.

Between 1913 and 1920 the United States passed through a period of inflation that exceeded in its extent anything in our previous history. Some of this was due to our large acquisitions of new gold, but far more of it was due to the release of gold from bank reserves, made possible by the issue of Federal Reserve notes when the reserve requirements under the Federal Reserve Act were changed to their present form by the amendment of June, 1917. After this change in the law, expressions of gratification over the great economy of money that would be effected thereby were very common. But it is a strange economy of money that results in inflation! When the history of some of the provisions of the Federal Reserve Act and its amendments comes to be written, the judgment will be that they were inflationist legislation and that their enactment added still others to a long list of monetary errors into which the country has fallen.

SOME UNLEARNED LESSONS

While the National Monetary Commission devoted a large amount of attention to the organization and working of the foreign banking systems, it neglected some aspects of those systems, a better understanding of which might have led to a clearer conception of the true defects of our own systems and of the best means of correcting them. Perhaps the most significant feature of the great foreign systems, according to the studies of the Commission, is the high degree of centralization that exists in control and management. But while the influence of the great central institutions in securing this centralization is strongly emphasized, no emphasis is laid on the effect of extreme concentration in foreign banking due to the widely extended system of branches. A relatively few great companies or corporations, including the central banks, control the business of banking in England, France and Germany. This control is exercised from central offices, usually located in the financial center of the country. This is an important, distinguishing feature of European banking as compared with our own.

In the United States much praise has been conferred on the Canadian banking system, but the chief difference between it and our own lies in the fact that Canada has relatively few

banking corporations with many branches widely scattered. Between 1900 and 1912 about 15,000 new banks were organized in the Unites States. This meant 15,000 new boards of directors and probably as many new conceptions of what constitutes sound bank policy and management. The existence of our vast number of independent institutions needs only to be mentioned to make it clear that no scheme of coöperation among banks yet devised in this country will give the degree of centralization in control and management that has been attained under the foreign branch systems.

Successful Banking Primarily a Question of Administration

Another aspect of this subject is also of vital importance. If there is any one lesson that the study of European experience enforces, it is that successful banking is more a question of administration than of law. As Hartley Withers says, "Good banking is produced, not by good laws, but by good bankers." An important consequence of the extreme concentration in foreign banking is that it brings the best banking talent into positions of responsibility and control. No doubt our best bankers are the equals of the best European bankers but our type of banking does not bring them into positions where they can exercise complete control over the banking business of the country.

The apparent control of the flow of credit in the leading European countries through the manipulation of the discount rates of the central banks, is another feature of foreign banking which has always been in sharp contrast with our own practice and which we have tried to imitate in our banking reform. The studies of the Monetary Commission furnish no satisfactory explanation of the true nature of this control and how it is exercised. The impression is often gained that the bank rate determines the market rate, but it would probably be just as true to say that the market rate determines the bank rate. When Lord Avebury, partner of Robarts, Lubbock and Company, was asked concerning the extent to which the bank rate governed their loan and discount transactions, he replied, "The bank rate generally is an expression of the market rate." The truth is that the market rate is a competitive rate in the determination of which the competition, actual or potential, of the Bank of England with the other banks is always a factor.

Influence of Banking Competition

The influence of competition is more clearly seen in the operation of the French system than in that of England. In replying to a direct question concerning the competition of the Bank of France with the other banks, M. Pallain, the governor of the Bank of France, said, "On certain points there may be competition, and it is on account of this salutary competition that wherever a branch of the Bank has been established the rate of discount has been perceptibly reduced, in the interest of commerce."

The fact is that the control of the flow of credit in these countries is a competitive one. The central banks are not only bankers' banks and government banks; they are also public banks and compete with the other great centralized institutions for a share of the banking business of the country. Their relations to their governments, their prestige, and the fact that their managers think not only of profits but of the national economic welfare, places them in a strong competitive position and enables them to exercise

an influence much out of proportion to the amount of business they do.

There has been much discussion recently of the discount policy of the Federal Reserve Board and the control of the flow of credit under the Federal Reserve System. The charges of banks to their customers have not been materially affected by the manipulation of the rediscount rates. The explanation is that the Federal Reserve Banks are banks for banks and banks for government and not, at the same time, public banks in the true sense of the word. They cannot exert the competitive influence against the other banks that the foreign central banks exert. They are not in fact in the market and cannot, in consequence, share in market control.

The National Citizens' League

A Movement for a Sound Banking System

By HARRY A. WHEELER
Vice-President, Union Trust Company of Chicago

AS a result of the panic of 1907 the business men of the country became greatly concerned for the commercial safety of the future. At the annual meeting of the National Board of Trade, held in Washington on January 25, 26 and 27, 1910, the subject of monetary reform was discussed and the following resolutions were unanimously adopted:

Whereas, We assume that a plan for the revision of our currency system will be formulated after the National Monetary Commission has made its final report; and

Whereas, A revision of our currency system upon a permanently sound and scientific basis is of vital importance to all interests and should be accomplished as soon as practicable;

Resolved, That the National Board of Trade favors the adoption of a currency system which will be based upon the following fundamental principles and insure the following results:

First—Be absolutely fair to all interests and to all localities;

Second—Insure at all times an adequate supply of properly safeguarded currency;

Third—The volume of said currency to automatically expand and contract in response to the normal demands of the manufacturing, commercial, agricultural, and other legitimate interests of the country;

Fourth—Said system to be absolutely free from domination or control by political or any other favored interests;

Resolved, That the National Board of Trade calls upon all its constituent bodies to carefully study the fundamental principles of banking and currency, in order to intelligently aid the enactment of such legislation as will best conserve the interests of the entire country.

The National Board of Trade determined to devote one day in connection with its annual meeting in 1911 to a Business Men's Monetary Conference. January 18 was set aside as "Monetary Day." Two hundred selected commercial bodies were to appoint special committees to make a careful study of the banking question. Each organization was requested to submit its conclusions and recommendations to the National Board of Trade at least one month before the meeting and to send a representative to the meeting, to be held in Washington beginning January 17, 1911. The invitation met with a hearty response on the part of the commercial organizations throughout the country and a large number

of delegates participated in the conference.

The Business Men's Monetary Conference, under the chairmanship of C. Stuart Patterson of Philadelphia, adopted resolutions which ultimately led to the creation of the National Citizens' League. By these resolutions, the chairman of the Conference was authorized to appoint a committee of seven to organize a "Business Men's Monetary Reform League," with headquarters in Chicago and branches in the principal centers of the country, whose object should be to conduct a comprehensive compaign of education in behalf of some kind of national reserve association. It was agreed that the delegates to the Conference should endeavor to enlist the active aid of the commercial bodies they represented.

Acting on the authority of these resolutions, a committee was appointed composed of: C. Stuart Patterson, of Philadelphia, James J. Storrow, of Boston, Paul M. Warburg, of New York, Irving T. Bush, of New York, George D. Markham, of St. Louis, Fred W. Upham, of Chicago and Harry A. Wheeler, of Chicago. This committee was called into conference in Chicago on April 24, 1911. The committee was unanimous in its opinion that the responsibility of creating a national organization should be left with the business men of Chicago, who should conduct a nation-wide campaign from their city.

On April 27, 1911, a conference was called by the committee at which were present about fifty of Chicago's foremost business men, representing both the commercial and the financial field. This conference, after careful deliberation, agreed to accept as a duty and privilege the responsibility of conducting the campaign from Chicago as a center.

The new movement was initiated by the Chicago Association of Commerce. A joint meeting of the Board of Directors and the Executive Committee of the Association was held on May 29, and took action by passing the following resolution:

Resolved, That the Chicago Association of Commerce recognizing the distressing effects of panics on trade, capital, and labor, the consequent need of a sound banking system in the interest of all the people in the country, and the suggestion made for the creation of a National Reserve Association, hereby requests John G. Shedd, Marvin Hughitt, Graham Taylor, Harry A. Wheeler, B. E. Sunny, Cyrus H. McCormick, Julius Rosenwald, Charles H. Wacker, Frederic A. Delano, John Barton Payne, A. C. Bartlett, A. A. Sprague, J. Laurence Laughlin, John V. Farwell, Clyde M. Carr, Fred W. Upham, F. H. Armstrong, and Joseph Basch to form a National Citizens' League, the object of which shall be to give organized expression to the growing public sentiment in favor of, and to aid in, securing legislation necessary to insure an improved banking system for the United States of America.

Acting under this authority, "The National Citizens' League for the Promotion of a Sound Banking System" was organized and a certificate of incorporation was granted by the Secretary of State under date of June 6, 1911. Article 2 of the certificate of incorporation is as follows: "The object for which it is formed is to give organized expression to the growing public sentiment in favor of, and to carry on a campaign of education for an improved banking system for the United States of America." In organization and in operation the Citizens' League was at once made national.

The Chicago Association of Commerce only accepted a responsibility imposed upon it by the other commercial bodies of the nation to take the initiative in the conduct of a campaign

to which their support had been pledged. The only part taken by the Chicago Association, as such, was to launch the new League. This done, it surrendered all control into the hands of the Board of Directors of the League.

In April, 1913, pursuant to a call from the President of the United States and his Secretary of Commerce, the Chamber of Commerce of the United States was organized. It became the sucessor to the National Board of Trade and, recognizing its relation to the subject of monetary reform, established a close contact with the Citizens' League.

The first Annual Meeting of the Chamber of Commerce of the United States, in January, 1913, dealt with the problem as of first importance to the new incoming administration and instructed its Board of Directors to present the matter to the President-elect. In February, 1913, the directors carried into effect the mandate of the Annual Meeting by the following resolution:

The Chamber of Commerce of the United States of America believes the present moment to be one of grave import to banking and currency legislation. The country has been profoundly stirred by the discussions of the past two years. The defects of our present system are generally understood to constitute a menace, both to our domestic and to our international trade. The business men of the country should not again be exposed to the rigors of another such stringency as followed the large crop of 1912. The expected changes in our tariffs and the financing of another crop in 1913 make imperative immediate action by Congress. Moreover, it is apparent that the presentation of a sound measure to Congress would crystallize behind it the support of the business and banking interests of the country.

Therefore be it Resolved, That the Board of Directors of the Chamber of Commerce of the United States of America, acting under instructions unanimously voted by the convention of January twenty-first to twenty-third, 1913, urge upon the Banking and Currency Committee of the House of Representatives the early submission to Congress in extra session of a measure which will overcome the difficulties from which we are suffering; upon the Senate, its prompt consideration of such measure at the extra session; and upon President-elect Wilson, his cordial and earnest support in favor of early and complete legislation.

And be it further Resolved, That a copy of this memorial be sent to President-elect Wilson and to Honorable Carter Glass, of the Banking and Currency Committee of the House of Representatives.

A standing Committee on Currency and Banking was also appointed to press upon the Administration the necessity for early action, to follow legislative development, and to prepare a report for subsequent submission to the membership through referendum, as provided in the rules.

This committee was composed of Wallace D. Simmons, St. Louis, Chairman, John W. Craddock, Lynchburg, Virginia, Irving T. Bush, New York City, Edmund D. Fisher, New York City, Edward D. Page, Oakland, New Jersey, Joseph French Johnson, New York City, J. Laurence Laughlin, Chicago, George A. Mahan, Hannibal, Missouri, William A. Scott, Madison, Wisconsin, William George Bruce, Milwaukee, Wisconsin, J. M. Miller, Jr., Richmond, Virginia, Allen Cucullu, Lynchburg, Virginia, John V. Farwell, Chicago, Edmund D. Hulbert, Chicago. It completed its preliminary work in August, 1913, and sent to referendum a report on pending legislation with recommendations for amendment in keeping with the principles put forward by the National Citizens' League.

The League, having completed the

work for which it was organized, formally requested the Chamber of Commerce of the United States to pursue the subject through its legislative stages and disbanded; the Chamber, through its Committee, followed the matter closely until its "Federal Reserve Act" became a law.

The Educational Campaign for Banking Reform

By A. D. Welton
Continental and Commercial National Bank, Chicago

ORGANIZING the National Citizens League in 1911 was no less a task than organizing the country. It was the final step, outside of political declaration and legislative action, to bring about a demand for the reform of the nation's banking laws. The havoc of the last panic had been wrought. Emergency legislation in the form of the Aldrich-Vreeland Act was on the Statute Books. The Monetary Commission had junketed, experted and ruminated and Senator Aldrich was working on a reform proposal.

From these statements it might be gathered that public sentiment had at least begun to crystallize; that the subject of all this discussion and effort was nearing the point of issue and action. Nothing was farther from the truth. There was no popular comprehension of what it was all about. Panic meant only a lack of currency. Newspaper writers were miles at sea. Politicians were floundering in darkness. Practical bankers were looking to their few leaders for guidance. The economists, however clear their theories, were blinded by traditions. and precedents of long standing. There was a dominant desire for a change but any suggestion of a practical plan raised a clamor of hostility to centralization, the great political bugaboo.

The persistence of political rancor found a new demonstration every time a central bank or the centralization of banking power was mentioned. The traditions of the Democratic party stood as strongly in this respect as when Andrew Jackson and Nicholas Biddle fought over the Second Bank of the United States eighty years before. The mention of asset currency roused the smoldering fires of greenbackism and free silverism. It was plain that many people cherished the belief that issuing currency was a sovereign power of the government, and Mr. Bryan was present to insist that such was the case.

Every time the question of currency had come up for popular consideration in the three preceding decades, the believers in soundness as wrought by a single gold standard had been on the defensive. They merely prevented their enemy from doing something vicious. The one constructive bit of legislation was the Gold Standard Act of 1898. That followed the affair of 1896 as the Aldrich-Vreeland Act and the appointment of the Monetary Commission followed the panic of 1907.

Education a Formidable Undertaking

All the studies of the Commission pointed to the necessity of a plan for banking coöperation, for mobilizing reserves, for making both currency and credit elastic, and for creating a discount market. It was a formidable

enough undertaking to make any considerable portion of the people understand these things. It was a much larger one to make a considerable portion of them unlearn the financial follies they had been taught.

For this undertaking the teachers were not many. It was necessary to train teachers. The bankers were of little assistance in this way. Very few of them understood the science of banking, however versed they might be in the art of it; fewer still were competent to teach the economics of money. Moreover, the bankers were under suspicion. Had they not defeated Mr. Bryan in 1896 and subsequently and also subsequently? Mr. Bryan had frequently testified to that fact.

Finally, Senator Nelson W. Aldrich was Chairman of the Monetary Commission. For years he had been in a conspicuous position of leadership. His name was synonymous with everything abhorrent to progressive thought. In the public mind he was first friend of the trusts, advocate of special privilege, the defender of Wall Street and ally of the money devil. Politically, it made no difference that the Senator from Rhode Island had worked hard for years to equip himself for the task now on hand. It was of no moment that his great ambition was to give the United States a sound banking system or that his devotion was complete and unselfish. He was a popular target for editorial anathemas and anything emanating from him must be bad because of its origin.

In June, 1911, approval of a plan for a new banking system meant approval of Aldrich. The National Citizens' League came into existence under a handicap.

The "Money Trust" was an active monster of that day also. It was an indefinite something which could be charged with all kinds of crimes and would plead to no indictment. There were two "money trusts" in fact—one that the politicians created out of their vivid imaginations for their own private uses, and another, defined as a "community of interest" among powerful bankers, created by a defective and inadequate banking system. The imagined "Money Trust," linked with a plan to reform the banking and monetary system, became much more imposing as a political spectre. Such a "Money Trust" must necessarily have impious designs, and what more natural than it should seek to have the banking laws remodeled to fit its own purposes!

Here was another barrier the League had to take.

POLITICAL AND PARTISAN COMPLEXITIES

Another circumstance lets in light on the difficulties that lay before this economic missionary. Republicans had passed the Aldrich-Vreeland law and planned the work of the Monetary Commission. Republicans had planned to drive through a new banking act. But a new Congress had been elected with a Democratic House. There were even predictions that the next president would be a Democrat. Wisdom forbade that the League have even a remote appearance of partisanship. As a matter of fact the manner of its organization made partisanship impossible but it was frequently charged in the first months that this was "the million dollar organization formed to put over the Aldrich banking scheme."

It is unnecessary to go farther into the conditions of the day to show that the League had a large task and that it would have to justify itself by performance if it was to survive and succeed.

EARLY INVENTORY OF THE LEAGUE'S WORK

It succeeded so well that in March, 1912, it took account of itself as follows:[1]

The campaign for banking reform has been carried into 44 states. The National Citizens' League has now 46 organizations—one in each of 43 states, two in California, and the German section with headquarters in New York City. The extension of this organization work reflects the progress of the sentiment for an improved monetary and credit system.

The League came into corporate existence in June, 1911. It is a non-partisan organization. It has no affiliations with any class or any interest. Among the 1,500 officers of its branches and its increasing thousands of members, men engaged in manufacturing, merchandising and agricultural business are in the great majority. The business element is preponderant. The League and its campaign have been indorsed by resolutions adopted by 68 boards of trade and associations of commerce and similar organizations.

There is reason for this preponderance of business men. The League had its origin at a meeting of the National Board of Trade in Washington. The business organizations represented there felt that they should have a voice in the question of improving anything of such vital interest to them as the monetary system.

C. Stuart Patterson, of Philadelphia, was made chairman of a committee appointed at that meeting which later conferred with the Chicago Business Men's Monetary Reform League.

The Chicago Association of Commerce volunteered to launch the new organization and requested the present Chicago Executive Committee to undertake the work. Thus the National Citizens' League came into existence.

The astonihisng feature of the progress of the League is that it has met practically no opposition. This is undoubtedly due to the fact that its work has been wholly educative. It has indorsed no particular scheme of reform. It deals in concrete plans only by way of illustrating the great general problems of efficiency of bank reserves, a discount market, independent banking, an elastic currency and credit system and adequate banking facilities. Its belief is that when the people come to have an understanding of the fundamental requisites of an efficient monetary and banking system the legislation will take care of itself. With the fundaments understood, as they will be, the working out of the details may be left to Congress. How the application is made, or what the system is called are matters of no importance. Who frames the measure finally adopted or after whom it is named, are equally inconsequential.

[1] *Banking Reform Magazine*, March 16, 1912.

RECRUITING THE FORCE OF EDUCATORS

It is not surprising that an organization so elaborately born should have a name as elaborate. Almost the first error was in this selection. The National Citizens' League for the Promotion of a Sound Banking System was the cumbersome heritage of the men who later assumed the work of giving the scheme publicity. As the economists—the professors of political economy—were about the only ones who could write on questions of banking, they were drafted early. The work of creating organizations in the various states was speedily got under way. Pamphlets on pertinent subjects were produced and printed. Speakers—mostly economists—were recruited. A declaration of the principles the League indorsed was made. Large sums of money were spent. Later, and not much later, the difficulty that always confronts such organizations, was encountered. It was necessary to expend time and energy in raising funds to support the work.

The publicity work was conventionally organized. Pamphlets, whose distribution called for mailing lists,

were a matter of course. Membership in the League at $1 a year carried with it all published matter and an obligation to spread the gospel.

The state and local organizations, in some cases self-supporting but always with a paid secretary, supplied names for the mailing lists and often did the distributing. The entire list of League officers and directors would make a business blue book. Local secretaries were chosen, so far as possible, because of some familiarity with publicity methods. There was no rule. In some states publicity was the only medium used. In others, dependence was placed on meetings and speakers. In still others, local business organizations were enlisted. This was all ordered by expediency or the desires or peculiarities of the local officials.

The undertaking of the central office in Chicago was to guide the thought of every member of the League, every officer of each state organization. As loosely joined as the organization was, a single policy and harmony of purpose were indispensable.

The marvelous and general lack of familiarity of the general run of bankers and business men with monetary problems was of great assistance. They had to take what was given them because they had practically no other sources of information. The old sources of monetary information were dried up. Previous demands for monetary reform were directed at the currency and the quantity of it. Financial progress in terms of elastic credit and bank reserves was unprecedented and, considered by itself, strikingly logical.

This is not to say that the old "isms" did not outcrop at frequent intervals and in unexpected places. The local secretaries watched carefully for such outbursts and they were carefully met and countered. Some of these were temporarily serious but usually they were ludicrous. All were treated alike. If the opponent of banking reform or the advocate of something unsound found space for his outpouring in a newspaper, the same newspaper was supplied with other material, often through a local League representative. If the first newspaper refused publicity, the rival paper was tried. If both were recalcitrant a local mailing list was compiled and used.

Monthly Magazines the Greatest Publicity Medium

The League's monthly publication, *Banking Reform*, was used in most cases. It was the uninvited visitor to every newspaper office in the country. It could be, and frequently was, used to meet some special opposition. When a weekly paper in an obscure county of California assaulted the Monetary Commission, the League, banking reform and everyone interested in it, a special edition of *Banking Reform* was printed and sent to everyone in the county. It was effective.

When a venerable, retired county judge in Texas unlimbered a page of heavy artillery in the county seat paper on the sacred and sovereign right of the government to issue money, the case could not be ignored. The rhetorical flood was broken up, the facts extracted and a reply written and sent to the paper. It was published—two-thirds of a column. The venerable judge countered with another solid page. The reply was short and pointed. The judge was unwittingly doing well for the League. He became interested in the new proposition. He wrote to headquarters for pamphlets. A month later he graciously acknowledged his conver-

sion, sent in a dollar and joined the League. This incident had no repetition. The devotees of greenbacks, free silver and the "sovereign right of the government" were, and are, irreconcilable but they were not troublesome for long. Their attack lacked versatility and mere continuity made it tiresome.

From the viewpoint of real publicity the monthly, *Banking Reform*, was the mainstay of the publicity campaign. It was the messenger to the press. It permitted repetition and reiteration, which were necessary to give editors familiarity with what was to them a new terminology. It was slow and disheartening work for many months. Once the fervor of early political controversy had cooled and political economy was the order, publicity results were scant. In the central office clippings were garnered with care and treasured in the files. One of the first months of effort brought only seven. The next month there were none, which was interpreted to mean that the seven were accidents or incidents of editorial good nature.

A Time When Politics Helped

Politics again intervened to give a stimulus. The other side of the League's organization was at work. State conventions of the political parties were ahead. The League's text book, *Banking Reform*, came from the press. The book was distributed widely to members, whose number it was instrumental in increasing greatly, and was extensively reviewed. The book stimulated interest in the magazine for which the demand also increased. The clipping agency employed began to send in bulkier packages. These could now be read but they were no longer filed. When the Alabama Democratic convention had declared for "a democratic and non-partisan revision of our antiquated banking laws" and demanded the creation of an "elastic note and credit system," the turn came. The politicians were becoming familiar with the terminology.

In the platforms of state conventions of both parties—and they followed rapidly—there were phrases and terms which bespoke familiarity with the League's literature. Naturally these platform utterances were commented on by newspapers everywhere. The comments were almost universally favorable. The terminology in this field began clearly to indicate familiarity with banking reform.

In June, 1912, came the great national conventions. Both Democrat and Republican platforms had planks on the monetary question. Neither one of them meant anything in particular. The Republicans called attention to the party's historic stand for a sound currency, and the Democrats smashed away at Wall Street and the "Money Trust." The League's publication said that banking reform "is a political question only so far as its solution requires political attention in the highest sense of the term. There is no chance that a Democratic scheme of reform will be better than a Republican scheme because it is offered by Democrats, or that a Republican scheme will be superior because it is offered by Republicans. In banking methods neither party is at an advantage over the other because banking is not a matter related to their differing conceptions of popular government."

Committed to banking reform and not to politics or party, the League's purpose was to keep, so far as possible, the question from assuming a partisan aspect.

With the political phase formally entered, however, the publicity campaign became more difficult in one

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aspect and much easier in another. There was no longer difficulty in having matter accepted and printed by all kinds of publications. It was in constant demand. The problem was to hold discussion to the essentials. Clippings now came in huge bundles and were dumped summarily into waste baskets. No one had time to look at them. The venerable judge from Texas might have flashed his message in fire on the sky and no League official would have heeded, for banking reform had passed from the stage of a vague request to a demand for speedy political action. It was no longer a question of a new banking law, but what kind of new law.

Enunciation of Fundamental Principles

In September, 1912, the League stated the principles it believed should underlie a banking bill. The statement gave as the reasons for banking reform:

> To prevent the recurrence of money panics.
>
> To provide for seasonal and special demands for currency and credit.
>
> To insure more uniform and steady interest rates throughout the country.
>
> To divorce commercial from investment banking.
>
> To strengthen our international credit.
>
> To establish higher standards of banking.

It is remarkable, perhaps, in the light of current discussions that in 1912, *Banking Reform* said:

> The National Citizens' League believes that these reforms in our banking and currency system can be best brought about by the formation of a coöperative association of all classes of commercial banks, with restricted powers, managed by a board of bankers, Federal officials and other citizens. The Association should not be a money-making institution and all earnings beyond a fixed rate should go to the national treasury. This association should:
>
> Hold the final banking reserves.
>
> Act as fiscal agent of the government.
>
> Rediscount standardized commercial paper for banks at published rates of discount uniform over the country.
>
> Issue circulating notes secured by gold and commercial paper.
>
> Deal in gold and foreign exchange.
>
> Establish foreign agencies.

It must be remembered that this statement was made two months before Woodrow Wilson was elected president and eight months before Congress began to debate the Glass bill.

The League's principles were carefully drawn very early in the campaign. They took no account of partisanship, except to guard against it, as generally befitted an organization of business men bent on securing an economic reform. The principles were:

> 1. Coöperation, not dominant centralization, of all banks by an evolution out of our clearing-house experiences.
>
> 2. Protection of the credit system of the country from the domination of any group of financial or political interests.
>
> 3. Independence of the individual banks, national or state, and uniform treatment in discounts and rates to all banks, large or small.
>
> 4. Provisions for making liquid the sound commercial paper of all the banks, either in the form of credits or bank notes redeemable in gold or lawful money. Legalization of acceptances and time bills of exchange in order to create a discount market at home and abroad.
>
> 5. Elasticity of currency and credit in times of seasonal demands and stringencies, with full protection against over-expansion.
>
> 6. The organization of better banking facilities with other countries to aid in the extension of our foreign trade.

In the beginning, these six principles were the guide in all publicity. Their amplification came when the

final political stage was reached as noted above.

The so-called "Money Trust" investigation was an incident which received only incidental attention. In an educational way it had no significance. What is known as Wall Street never showed hostility to the League; it gave much financial assistance and seemed quite unconcerned over the prospect of decentralized bank reserves.

ATTITUDE OF BANKERS AND OTHER ORGANIZATIONS

Bankers and bankers' organizations were always helpful and friendly. They were never keen for the League's principles and, as a rule, they were collectively and individually more interested in the probable effects of any change in laws on their established method of operation. In this respect they often clashed with the business men whom the League represented but they always admitted the need of change in the banking scheme.

As the campaign progressed other forces came in to give assistance and often to interfere. Usually these organizations made plans. Of plans for a new banking system there was a myriad. They came up from all sides. Everyone seemed to have a plan. The League never had one. In that lay its strength.

In September, 1921, Woodrow Wilson spoke of the need for a new banking law in his address accepting the Democratic nomination for the presidency. Soon after his election, and that of a Democratic House and Senate, it became obvious that banking reform legislation would be a Democratic action. This political shift made it advisable to give unusual attention to the South because seniority would place southern Democrats in the important positions in House, Senate and elsewhere.

The new President's message on banking reform preceded action in Congress. That is another story. During this period of many hearings by the banking and currency committees the publicity was continued as actively as ever. As the League was concerned only with principles, and not with administrative forms, its printed matter gave no heed to the latter except for informative purposes. The magazine had naturally become the dependence of many thousands of persons for such information. Many newspapers looked to it for an interpretation of the news developments. Its influence was wide. Reading of the news and comment on the proceedings in Congress made the extent of this influence clear and certainly the members of Congress were not immune to it.

When the Glass bill had passed the House, it became apparent that the League's work was nearly done. It had undertaken only to lay a foundation for legislative action. It is true its organization work had been carried into practically every congressional district. The gospel of banking reform was carried most effectively to every congressman from his home. But when the Glass bill had become the Glass-Owen bill and the Senate had it under consideration, the League began to wind up its affairs.

CLOSE OF THE CAMPAIGN

In the last issue of *Banking Reform*, October, 1913, it was said:

> The League never undertook to participate in the actual work of legislation. Article 2 of the certificate of incorporation reads:
>
> The object for which it is formed is to give organized expression to the growing public sentiment in favor of, and to carry

on a campaign of education for, an improved banking system for the United States of America.

Of the success of the League's campaign there is no doubt. It is evidenced by the fact that for more than two years the question of monetary reform has been growing in the public mind until today it is the question of paramount political as well as economic importance. It has occupied the latter position for many years, but it was not until the League's work was well under way that it was lifted out of classification with the impenetrable mysteries to that of a great, and finally the paramount, public issue. One Congressman reduced the situation to terse form when he said, "No League, no bill."

The League has distributed literally millions of pamphlets. It has been the means of supplying literally millions of columns of matter to newspapers. It has supplied speakers for thousands of meetings. But the indirect results of its efforts have been more momentous. It brought interest in the question of monetary science to an acute stage. It challenged every argument founded on a false conception of monetary economics. It supplied material which made editorial work easier. It translated technicalities into simple language. It stimulated thought and discussion. It freed thousands from the thraldom of half a century of false teaching.

The fact that the Glass bill is not perfectly satisfying is in nowise attributable to failure on the League's part. It has been stated many times in these columns that the machinery by whose operation the principles enunciated were to be given operation might assume any one of many forms. The Monetary Commission evolved one form, the Glass Committee evolved another. Neither is perfect in anticipated operation. It is doubtful if any machinery will be perfect until made over after practical test. But either plan has obvious merits and forms a basis on which can be built up an operating success.

The Executive Committee of the League feels, therefore, that the work of the organization has been practically completed and success has been achieved. It will retain its corporate entity and maintain its organization intact against possible contingencies until results are written in the statute books. But unless the unexpected happens, the League will rest content that the question of banking reform and its satisfactory solution is in the hands of the national legislature. Over this body it has no control, and seeks none, as it has had none anywhere save what was based on logic and built up on adherence to proved principles of monetary economics.

As a final testimony of the efficiency of the League's campaign, it may be pertinent to record that the terse statement, "No League, no bill," was made by the Honorable Carter Glass.

The Federal Reserve Act in Congress

By H. PARKER WILLIS
Columbia University

MUCH has been vaguely or erroneously written of the early history of the Federal Reserve Act and there is already a widespread misunderstanding regarding it. Some part of this misunderstanding is due to the fact that much of the work on the Act was done in committee or in caucus or in private conference. To review the whole history of the measure would be a task of lengthy detail. The following article is not intended to enter into any such elaborate review but to set forth in compact form the chief facts, without controversial discussion. What it offers is merely a consecutive outline of the history of the Federal Reserve Act during its formation and subsequent

discussion in Congress. It will afford, however, as definite an historical account as is possible within a very brief space, of the various stages through which this measure passed.

INCEPTION OF MEASURE

The inception of what afterward became the Federal Reserve Act grew out of the action of the Banking and Currency Committee of the House of Representatives in authorizing, during the spring of the year 1912, an investigation into currency and banking conditions. This authorization led to the organization of the Banking and Currency Committee in two parts, or sections—the one entrusted with an inquiry into what was at the time known as the "Money Trust" and the other assigned the duty of studying and recommending legislation designed to promote banking and currency reform. This second subcommittee was organized under the chairmanship of the Honorable Carter Glass, who had been for several years a member of the Banking and Currency Committee, and its first active work was undertaken at about the opening of April, 1912. At that time this subcommittee retained technical assistance, and instructions were given to make a general survey of pending banking and currency legislation, including especially the proposals of the National Monetary Commission which were embodied in what had come to be known as the Aldrich bill.

Such a survey of pending and proposed legislation, both recent and earlier, was completed and placed in the hands of the subcommittee during June of 1912. An informal discussion of the question of what lines should be followed, ensued. As a result of this informal discussion, it was agreed to prepare a tentative bill which should be based essentially upon the past experience of the banks of the country in organizing clearing house associations. The conclusion was definitely reached that a central bank of issue and deposit was not desirable but that, instead of this, a district type of organization, in which the banks of the country should participate, was to be preferred. It was further agreed that such district organizations ought to be vested with the function of issuing note currency upon what had come to be known as the elastic, or "asset secured" plan. It was further thought that the reserves of the country should clearly be transferred to such organizations and that large functions of examination and oversight of the rank and file of the banks should be provided for.

WORK OF SUBCOMMITTEE

With these very general principles definitely laid down as a basis, a bill was drafted during the summer and early autumn of 1912, and the substance of this bill was informally discussed at meetings of the subcommittee which occurred during November, 1912. At that time agreement was reached that further progress in the development of the proposed bill would not be possible unless the attitude of the incoming administration (the Honorable Woodrow Wilson having been elected President early in November, 1912) could be known. Mr. Glass accordingly addressed a letter to President-elect Wilson informing him generally of what had been done and asking for his views in the matter.

An early reply was received from the President-elect in which he expressed agreement in the thought that a suitable banking measure should be developed at an early date, and a time was set for consultation with representatives of the subcommittee of the Banking and Currency Committee. This date was December 26, 1912, at

which time Mr. Glass visited Princeton where President-elect Wilson was then living.

During the conference on the 26th of December there was laid before Mr. Wilson the substance of the tentative bill already drafted and question was asked as to his opinion regarding the extent to which the bill should go. Particularly was the question raised with him whether the new bill should provide for an emergency or permanent type of banking organization; whether it should provide for local organization or for a central control of some kind; whether reserves should be transferred to the new banking organization and whether new note issues should be provided for. Most of these points had not been considered by the President-elect except in a very general way. He expressed himself, however, as desirous of making the measure a thorough-going, complete banking and currency bill, and was positive in his thought that there should be a central control organization—although he accepted the view already developed in the subcommittee—and that actual banking should be carried on in districts and by local organizations acting more or less independently of one another. He was ready to support the transfer of reserves from existing banks to the new organizations and, in general, granted his support to the idea of complete transformation of the existing banking system.

PUBLIC DISCUSSION OF LEGISLATION

By this time the fact that a bill was seriously under consideration in the subcommittee on legislation had become widely known throughout the country among those who were interested in securing action from Congress. It became necessary to consider the question whether hearings should be given to those who had arguments to present and views to express and whether it was or was not wise to allow the contents of the proposed bill to become known. On both these points a definite policy was developed as follows:

1. The question of holding hearings had been discussed with President-elect Wilson at Princeton at the meeting already referred to, and he had favored the holding of hearings. It was now determined to make the hearings very inclusive and to send out letters to representatives of labor, to manufacturers' associations, to bankers, to economists and to business men.

2. It was further determined to make public no draft of the proposed bill but to mature it slowly and carefully, especially in view of the fact that action on it could not be expected until after the incoming of the new administration on March 4, 1913. It was, however, determined to make known to persons who had a legitimate interest in the pending measure the principal lines of thought on which the committee was working. Statements on this subject were made from time to time to a variety of inquirers, some of them bankers, some, business men or representatives of their organizations, some, legislators. As a result there was a crop of bills—some published, others never printed but filed with the committee—whose authors sought to put down in writing what they believed to be a plan similar to that favored by the subcommittee and hence presumably likely to become the official plan of the administration.

There was thus a large crop of so-called "original bank bills" in Congress. The Aldrich bill was remodeled by advocates for possible use, free of many objectionable features, and was issued as a revised plan by western students of banking. Other plans were developed in the same way and in

sundry cases the authors of such plans continued to take an interest in the matter after the Federal Reserve Act became public and as it passed from stage to stage, eventually correcting them and bringing them up to date as the Reserve Act itself was perfected in the course of its passage through the different legislative processes. Thus there was at all times during the year 1913 a considerable array of measures whose general thought was the same that had already been developed by the Subcommittee on Banking and Currency, although until such time as the Federal Reserve Act itself became public the terms of the various bills were, of course, widely different both from one another and from those of the Act itself.

During the months of January and February, 1913, the Banking and Currency subcommittee held many hearings upon the plan already laid out and an entirely new redraft of the Federal Reserve Act was made. This redraft had been practically completed at the close of the hearings in February. It differed from the original act chiefly in detail, embodying in one consistent statute the various elements of the plan which had been submitted to President-elect Wilson in the preceding December. It included provision for the transfer of reserves and the issue of notes, for the refunding of government bonds as well as a provision for government supervision and control of the Reserve Banks, although such supervision and control was shared between the government itself and the bankers of the country. This bill also included a provision for the guaranteeing of bank deposits, insofar as the assets of the member banks would permit, and it also contained an elaborate plan for the election of directors in Reserve Banks with the aid of commercial bodies.

After the close of the hearings another redraft was undertaken and was completed about the beginning of March, 1913. This third main draft contained principally improvements in language and in technique but discarded the plan of guaranteeing bank liabilities and also greatly simplified the method of electing directors.

With the preparation of this plan and the expiration of the old Congress on March 4, the work of the subcommittee was completed and the final draft was once more submitted to President-elect Wilson at Trenton, N. J., where he was visited by Mr. Glass, and the finished work submitted to him. The President-elect again gave to the bill in its revised form a general preliminary approval.

WORK OF THE SECRETARY OF THE TREASURY

Little work was done on the Federal Reserve Act during the month of March, 1913, but at the beginning of April, President Wilson entrusted to Secretary of the Treasury McAdoo the duty of reviewing the measure for the purpose of reporting to him on the subject. The measure was canvassed section by section by the Secretary of the Treasury and a variety of minor changes were made in it. These changes related principally to details of language. Two important changes were, however, introduced during this process. The first was the acceptance of the idea that the notes to be issued by the new banks should in some way be passed upon or approved or guaranteed by the government, while modifications in the plan for the refunding of government bonds were also introduced. It was the thought of Secretary McAdoo that the original funding provision had been unduly unfavorable to the government.

Many of the changes in language proposed in the first instance by representatives of the Treasury were after-

ward cancelled and the original language restored when further study of the draft had convinced the Treasury representatives that the changes which they were at first inclined to introduce had not been well warranted.

One further change of great importance was introduced during this period of the bill's history, although not at the instance of the Secretary of the Treasury. This was the provision calling for par clearance of member bank obligations. There had been a doubt in the minds of the subcommittee whether the introduction of this provision, in addition to the other extensive elements of the measure, would be desirable or not, and it was eventually determined to present the matter to Secretary of the Treasury McAdoo in order to get his thought on the subject.

The "Money Trust" section of the Banking and Currency Committee had in the meantime carried on a lengthy "probe" into banking conditions in New York and had reported that, in no small measure, unsatisfactory conditions there were due to faulty clearing house organization. It had, therefore, recommended certain legislation designed to control clearing houses. Secretary McAdoo was of the opinion that some provision relating to clearing and intended to give the clearance power to Federal Reserve Banks would be desirable as showing that due attention had been paid to the work of the "Money Trust" subcommittee. He accordingly assented in general terms to the plan which was placed before him and which was therefore incorporated into the bill.

Attempt to Substitute an Administration Bill

Careful study of the Federal Reserve Act as thus drafted, however, led Secretary McAdoo to doubt the wisdom of the measure, and he, therefore, proposed and brought to the attention of representative bankers a plan of his own under the terms of which the Treasury would have gone, more or less extensively, into a banking business, with the various subtreasuries as branches. The appearance of this plan, fathered by the Secretary of the Treasury, naturally tended to throw grave doubts upon the prospects of the Federal Reserve Act. About the end of May the whole situation was forcefully brought once more before the attention of the President for his decision.

Meantime a separate and independent bill had been developed by Senator Robert L. Owen of Oklahoma, who had become Chairman of the Banking and Currency Committee of the Senate. President Wilson thus had before him the McAdoo plan, Senator Owen's tentative plan and the draft of the Federal Reserve Act—as well as, of course, a multitude of other bills, drafts and suggestions which had been filed with him by many citizens. After very considerable attention the President determined to hold to his original decision in favor of the Federal Reserve Act and accordingly announced his determination to discard all of the other suggestions which were then before him. In so doing, however, he found it necessary to consult with the so-called Bryan element in the Cabinet which had already been generally advised of the intended scope of the Federal Reserve Act.

As a result of this consultation two further definite changes were made in the bill: the notes to be issued by the several banks were now definitely made liabilities of the United States, while it was determined that the Federal Reserve Board should be exclusively composed of government appointees to be named by the President and confirmed by the Senate. These changes

having been agreed upon, the bill was introduced into Congress in its existing form and thus finally worked out.

Shortly afterward a new House banking and currency committee was appointed with Mr. Glass as chairman. The Glass bill—the completed draft of the Federal Reserve Act—was promptly referred to the Banking and Currency Committee as thus organized and the actual work upon the measure was begun. This work was vigorously undertaken toward the end of June, 1913.

CHARACTER OF MEASURE

It will be observed that the first innovation in the terms of the original measure had come at the instance of Secretary Bryan during late May, 1913. It is interesting, therefore, to know just what the plan was which had been completed for introduction into Congress. Space unfortunately forbids a detailed description. At that time, however, there was prepared for the use, and at the request, of the President, a digest stating the chief content and purpose of the bill. This digest, heretofore never published, is an authentic description of the conclusions tentatively reached up to that time and shows fairly clearly the nature of the original measure. It is accordingly subjoined verbatim:

MEMORANDUM ON SCOPE AND EFFECT OF H. R.——, TO REORGANIZE THE PRESENT BANKING AND CURRENCY SYSTEM.

In H. R. —— prepared for introduction by Representative Glass of Virginia it is intended to furnish a comprehensive measure for the attainment of four objects:

(1) Provision of a place for rediscounting commercial paper of specified types.

(2) Provision of a basis for elastic note issues properly safeguarded.

(3) Refunding of outstanding 2 per cent bonds so as not to inflict loss upon present holders.

(4) Provision of machinery for doing foreign banking business.

In order to accomplish these purposes fully it is necessary to (a) repeal certain portions of existing law; (b) rectify various conditions in the present national banking system which are in some cases only indirectly connected with the objects sought; (c) furnish a new class of institutions for the performance of some functions which cannot well be entrusted to existing banks, or at all events can better be performed by others and (d) alter the present reserve system to a very material degree.

The scope of the bill can best be understood by an analytical review of its contents, with reference to sections and paragraphs. This is herewith subjoined.

BASIS OF PRESENT SITUATION

The present banking situation in the United States rests upon the National Bank Act proper as slightly modified from time to time and upon the so-called Aldrich-Vreeland Act (Act of May 30, 1908). Of these acts the latter is completely repealed (Section 1) on the ground that it has never become operative, probably will not become operative except under extreme stress, and was never satisfactory. The National Bank Act itself is modified in numerous essential particulars which will be pointed out from time to time in this memorandum. In a separate measure a general revision of the administrative provisions of the National Bank Act is also provided.

NEW CLASS OF BANKS

Fundamental to the idea of the bill is the creation of a new class of banks (Section 2), to be known as National Reserve Banks. The chief points about these banks are as follows:

(1) Number to be twenty with possible increase later as provided. (Section 2.)

(2) Ownership to be in the hands of the national banks of the twenty districts in which the banks are situated. (Section 2.)

(3) Capitalization to be 20 per cent of the capital of the stockholding banks, one half paid in and one half subject to call. (Section 2.)

(4) Business to be as follows:

(a) Rediscounting of paper presented by

stockholding banks and by other banks under specified conditions, provided such paper grows out of actual agricultural, commercial or industrial transactions and does not run more than a specified number of days. (Section 14.)

(b) Buying and selling government securities, gold and silver bullion and foreign coin, foreign exchange. (Sections 16 and 17.)

(c) Government fiscal operations. (Section 21.)

Issue of Notes

The bill provides for the maintenance of existing bank notes outstanding so long as their present issuers want to keep them out, and also calls for the establishment of a note issue on a new basis to be put out by the National Reserve Banks. Provision is, however, made for retiring the present National Bank notes at the discretion of their issuers. This plan comprises the following points:

(1) Every national bank would be allowed to continue its note issue exactly as at present. (Section 26.)

(2) It would not, however, be allowed to increase the issue beyond the point at which it stood when the law was passed. (Section 26.)

(3) No newly organized bank would be required to purchase government bonds; hence no new bank would have any note issues. (Section 26.)

(4) Whenever an existing bank retired any of its notes and withdrew its bonds it would lose the right to put out further issues of notes above the amount to which its issue was thus reduced. (Section 26.)

(5) National Reserve Banks would be allowed to issue notes secured in the same way as their other obligations to an amount equal to twice the par value of their capital stock. They would also be allowed to issue additional notes if they desired, equal to the amount of notes withdrawn by the individual banks which might from time to time surrender their note issue privilege in part or in whole. (Sections 23 and 26.)

Disposal of U. S. Bonds

Recognizing (a) that the present 2 per cent bonds were sold to the banks on the basis of a pledge that they might continue to be used as a basis for circulation, and that therefore the government is morally bound to maintain their value in a corresponding degree; (b) and that it is desirable to retire the bonds now held behind bank notes and put in their place bonds whose value is sustained solely by their income-paying power, it is provided that:

(1) Banks now holding the bonds may offer these bonds for redemption or conversion into 3 per cent bonds at a rate not to exceed one tenth of their holdings each year. (Section 26.) This would mean that a maximum of about $65,000,000 a year could theoretically be converted, and the evidence is that that sum would be absorbed without difficulty by investors each year.

(2) At the end of ten years other holders of bonds would be allowed to convert them into 3 per cents. (Section 26.)

(3) As a result of these changes the government would be obliged to increase its interest charge the first year of the new arrangement by an amount not greater than one per cent on $65,000,000, or $650,000, while the second year a like addition would be made and so on, until at the end of ten years a possible maximum addition of $7,300,000 in interest charges would probably have been assumed.

Protection of Notes

Fully admitting the necessity of an absolute protection of note issues, the bill seeks to safeguard those for which it provides as follows:

(1) National bank notes are safeguarded at every point by exactly the same elements of protection which exist to-day, none of these being diminished in the slightest degree.

(2) Notes issued by National Reserve Banks are protected by a large gold reserve, by constant close government supervision, and by immediate and prompt redemption. Stringent provisions are made against counting any of these notes as a part of bank reserves, thus insuring their speedy return to the point of origin. (Sections 30, 31, etc.)

(3) All notes are made receivable by the government and are to be received by every bank in the system on deposit at par, without exchange. (Section 23.)

(4) Uniformity in the currency is obtained by making the National Reserve notes identical in appearance and wording with the National bank notes. (Section 23.)

(5) Power to oversee and control the issue of notes is placed in the hands of a supervisory board. (Sections 13, etc.)

GOVERNMENT CONTROL

Overseeing the whole system is created through a so-called Federal Reserve Board, (Section 13) with the following organization and functions:

(1) Board to consist of representatives of (a) National Reserve Banks (b) bank stockholders (c) the government itself. (Section 10.)

(2) Actual working body to be an executive committee of this Board consisting of Secretary of the Treasury, Comptroller of the Currency, and Attorney-General, with four members of the Federal Reserve Board chosen by the latter. (Section 11.)

(3) Board and Executive Committee, as thus made up, to have power to deposit Government funds in National Reserve Banks, to fix rates of rediscount in such banks, to compel any National Reserve Bank to rediscount the paper of any other, and to examine the banks of the system. (Section 13.)

STRUCTURE OF SYSTEM

The effort has been made to "popularize" the control of the whole system of banking thus built up while at the same time preserving a sufficient amount of centralization, controlled by governmental agency, to insure that the whole system shall be responsive to legitimate public demands. The bill is based on the belief that no one should participate in the control of the system unless he is either financially interested himself or chosen by those who are, save insofar as the government steps in to exert the authority of the whole community. With this in mind the system has been developed as follows:

(1) Organization, powers and functions of national banks are left as at present.

(2) National Reserve Banks are incorporated institutions holding Federal charters and in all respects managed like national banks except as to the election of directors which is provided for as follows:

(a) Banks in every district are divided into five classes according to capitalization. In each class the directors of the banks nominate a candidate for the directorship of the Reserve Bank. These are then voted on (one bank one vote) and a director is chosen for each of the five classes—five in all. (Section 4.)

(b) In the five classes aforesaid bank stockholders vote for and elect a director for each class by a process prescribed in each case making five in all, or with the preceding five, ten. (Section 4.)

(c) The ten men thus named select four others after a prescribed process, eight votes required to elect, and the nominees subject to rejection by the Federal Reserve Board. (Section 4.)

(d) A fifteenth member, to be Chairman of the Board of Directors is chosen by the Federal Reserve Board itself. (Section 4.)

(3) The Federal Reserve Board consists of two members from each district and the three government officials already specified. (Section 10.) It is not an incorporated body, has no banking functions but is supervisory.

(a) One member of the Federal Reserve Board in each district is chosen directly by the directors of the National Reserve Bank of the district. (Section 10.)

(b) A second member of the Board from each district is chosen by the bank stockholders of the district, voting by a prescribed method. (Section 10.)

(c) These members of the two classes referred to choose by ballot four of their own number to join with the government officers already mentioned as the Executive Committee of the Board. These four are designated by the Secretary of the Treasury to hold the offices of President, first and second Vice-Presidents and Secretary of the Federal Reserve Board. (Section 11.)

RESERVES

In the belief that the present reserve system is antiquated and unsatisfactory, that the massing of funds in New York and other financial centers of which so much has been said in recent years, is largely due to

the present reserve requirements of national banks, and that in order to get the real benefit from the system of rediscount which has been proposed as a remedy for many existing evils, it is necessary to base such system upon an actual control of reserves, provision has been made for recasting the present bank reserve system.[1] The plan includes:

(1) Transfer of reserves from existing national banks in reserve and central reserve cities, to National Reserve Banks. (Section 27.)

(2) Spreading out of this process of transfer over a period of fourteen months in order to give as little shock as possible to market conditions. (Section 27.)

(3) Ultimately the establishment of a Reserve System, at the end of the transition period in which so-called country banks will have 15 per cent of reserve (*i. e.* 15 per cent of total demand liabilities) such 15 per cent to be held, 5 per cent in the bank's vaults, 5 per cent with the National Reserve Banks and 5 per cent either at home or with the Reserve Bank; while reserve and central reserve city banks will have reserves of 20 per cent of demand liabilities, of which 5 per cent will be at home, 5 per cent with the Reserve Bank of the district and 10 per cent either at home or with the Reserve Bank. (Section 27.)

(4) The presumed effect of this plan will be to end the placing of reserves with central reserve city banks for use in stock market operations, to keep reserves in some measure at home, and to require speculators to get the funds they need in their operations either by directly borrowing them from persons who hold them and want to lend the cash for that purpose, or else by borrowing from the banks in the places where the operations are to be carried on.

Division of Business

The object of the bill is to effect a moderate division and classification of banking business along indicated lines, the net result, presumably, being summed up as follows:

(1) National Reserve Banks will be strictly limited to actual commercial and industrial transactions evidenced by very short term paper and on rare occasions under carefully prescribed conditions to financial operations protected by collateral. They will also be able to engage in foreign exchange operations, sales of government securities, etc., as already explained.

(2) National banks will be subjected to precisely the same restrictions as at present with a relaxation in favor of a moderate amount of real estate loans by country banks under carefully guarded conditions. (Section 39.)

(3) By a revision of the administrative features of the National Banking Act, provision will be made for close oversight of National institutions with a view to holding them strictly up to the requirements of a legitimate banking business. (Text of bill still to be submitted.)

(4) In order to possess themselves of the kind of paper entitling them to rediscounts, national banks will find themselves obliged to keep a reasonable proportion of their assets in the form of paper eligible for rediscounting, and this will mean very considerable emphasis upon the strictly commercial aspects of the business done by national institutions.

Position of State Banks

It has not been thought wise to permit State banks to own stock in the National Reserve Banks for two reasons:

(1) State banks by the terms of their organization are differently managed and controlled from national.

(2) The laws of the United States differ with respect to liabilities, the collection of debts, and other matters.

Hence the bill has attempted only to provide for giving these banks equal facilities for doing business by establishing the following conditions:

(1) State banks may affiliate themselves with National Reserve Banks by maintaining the same deposits with the National Reserve Banks that are kept by national banks under the proposed act. (Section 29.)

(2) State banks shall in these circumstances be entitled to do business with and get rediscounts from National Reserve Banks. (Section 29.)

[1] Including collections and clearances.

(3) State banks shall be subject to inspection and examination by National Reserve Banks. (Section 29.)

RELATIONS WITH TREASURY

It is believed that the present subtreasury system is unsatisfactory, clumsy, injurious to business and difficult to manage in times of stress. The bill therefore provides for:

(1) The placing of all current funds of the Treasury in National Reserve Banks and the payment of government creditors by check thereon. (Section 21.)

(2) The equalization of the public funds between the different reserve banks subject to a rate of interest to be fixed by the Federal Reserve Board. (Section 13.)

(3) The trust funds of the Treasury are to be held as at present in the vaults of the Treasury.

FOREIGN BANKS

Recognizing that present banking legislation under the national system is inadequate in its relation to foreign trade, because it furnishes far too little recognition of the necessities of the case, and believing that the development of foreign banking ought to be aided and promoted and at the same time regulated by the national government, it has been sought in drafting the bill to provide:

(1) A new type of institutions created for foreign trade purposes and organized by individuals or existing national banks or both. (Section 41.)

(2) Permission to establish branches in foreign countries and whenever necessary under specified conditions to establish such additional branches in the United States as may seem requisite.

(3) Authority on the part of the National Reserve Banks to deal in foreign exchange and otherwise to facilitate operations involving international trade. (Section 18 and Section 19.)

(4) Permission to national banks to do an acceptance business in all matters relating to foreign trade, the importation and exportation of goods, the furnishing of travellers' funds on letters of credit, etc.

(5) The more efficient and successful handling of financial relations between the United States and foreign countries through the placing of Treasury funds in the hands of National Reserve Banks.

COMMITTEE SUSTAINS BILL

The work of the Banking and Currency Committee covered a period of several weeks and was largely devoted to the improvement of details in the pending bill. A list of these changes would not be of special interest, even were it possible in a brief treatment of the history of the Federal Reserve Act. It is enough to say that the Committee speedily developed a difference of opinion with respect to the measure, a substantial section of it desiring to broaden the bill in the direction of action which would give to agricultural interests a larger borrowing power. Accordingly, the maturity of paper based upon farming operations was increased to 180 days although all other paper was prohibited from discount for a period of over 90 days. Some other concessions were made to so-called farming interests. Public control over the Reserve Banks was strengthened and a provision creating a so-called Federal Advisory Council, a body of bankers drawn from the various districts and directed to meet at intervals for consultation with the Federal Reserve Board, was established.

Outside these and a relatively small number of other amendments the changes in the Banking and Currency Committee of the House of Representatives amounted to little more than textual change effected for the purpose of improving or clarifying the language employed. When the bill, on September 9, was ready for introduction in the House of Representatives, with a committee report, but little alteration in it had been made in any essential particular. First, however, it was necessary that the bill should pass through the House of Representatives

caucus of the Democratic party. Although severely attacked in the deliberations of this body, which were held behind closed doors, no material change was introduced and the bill accordingly went to the House on September 18. After a short debate, it was finally adopted and sent to the Senate in a form not very different from that already given to it by the Committee.

SENATE HOSTILITY

In the Senate the Federal Reserve Bill, for as such it was now coming to be known, encountered much more serious opposition than it had been obliged to meet and overcome in the lower chamber. The Banking and Currency Committee as then organized was not friendly to it. The Chairman of that Committee, Senator R. L. Owen, had prepared a bill of his own which had not succeeded in making headway. Its place was taken by the Federal Reserve bill which he had finally consented to introduce as drafted in the House.

In the Banking and Currency Committee at least two Democratic groups, neither of them friendly to the measure, were formed, while among Republicans practically two other groups existed, one inclined to favor the bill, the other, to oppose or remodel it. In hearings before the Senate Committee, lengthy opportunity was given to the advocates of a central bank to present argument. Eventually the discussion, although taking a wide range, settled down about the question as to whether there should be fewer or a larger number of Reserve Banks, whether the Reserve Banks themselves should have full power over reserves and collections, and whether the type of note issue which had been favored in the House bill should be retained. It was with great difficulty and, probably, only as a result of the strongest pressure on the part of the Administration that it proved possible to obtain a favorable report to bring the bill before the Senate for debate and eventually to pass it.

Analysis of the Senate debate would be out of the question in any brief space and may therefore be passed over with the remark that, although the discussion resulted in changes in the Federal Reserve bill, which, when combined with those already made by the Senate Banking and Currency Committee, produced a measure very different from that adopted by the House, nearly all of the changes made by the Senate, as will presently be seen, were ultimately surrendered in Conference Committee, the bill being thus shifted back in substance to the original House form. During the Conference Committee sessions, it is worthy of remark, one important innovation was introduced; a substitute section relating to the refunding of government 2 per cent bonds was transmitted to the Committee by Secretary McAdoo and adopted practically as it stood in lieu of the provisions which had been made on that subject by the two houses.

CHANGES BY THE SENATE

It is now worth while to sketch briefly and succinctly the changes made by the Senate in the House draft of the Federal Reserve Act insofar as they were ultimately retained in the final law. The work thus done may be surveyed as follows:[2]

Turning first to the alterations in the House bill that secured acceptance, the principal features may be enumerated as follows:

(1) Introduction of provision for sale of stock in Federal Reserve Banks to the public in the event that not enough banks

[2] From article by the author in *American Economic Review*, March 1914.

subscribe for the stock to furnish an adequate capital in any given district.

(2) Provision for alternative voting in the choice of directors of Federal Reserve Banks so as to insure prompt election.

(3) Reduction of number of Federal Reserve Banks to not more than 12, as against the "at least 12" of the House bill.

(4) Elimination of requirement that all national banks recharter.

(5) Broadening of powers of Federal Reserve Board and modification of language relating to rediscounts between Federal Reserve Banks, so as to render such rediscounts easier than was intended by the House bill.

(6) Provision that the Secretary of the Treasury might, not must, deposit public funds in reserve banks.

(7) Reduction of reserve requirements placed upon member banks under House bill.

On the other hand, the following important points were yielded by the Senate in the conference:

(1) Omission of provision that holders of stock sold to private individuals (if any) should have voting power in directorates of Federal Reserve Banks and elsewhere.

(2) Elimination of guaranty of bank deposits, by use of surplus earnings.

(3) Elimination of provision that Federal Reserve Bank notes might be counted in reserves of stockholding banks.

(4) Restoration of provision that many classes of checks should be collected at par throughout the country, and that where such par collection was not enforced, the charge for making collection should be fixed by the Federal Reserve Board.

(5) Elimination of domestic acceptances, thereby excluding them from use by stockholding banks and from rediscount by Federal Reserve Banks.

(6) Modification of reserve requirements as formulated by the Senate so as to require actual cash reserves in the vaults of country banks (the Senate having entirely dispensed with such reserves after twenty-four months after date of the passage of the Act) and general stiffening of reserve requirements made by the Senate, although the final language still constituted a reduction below the House provision.

(7) Reduction of period of maturity for which discountable paper might run from 180 days to 90 days.

While various other points of modification and concession on either side might, of course, be enumerated, it is believed that the foregoing presentation is representative and shows sufficiently well the nature of the conference work and the character of the points conceded on either side. Assuming that such a fair or representative selection has been made, it is evident that the work of the conference resulted in the establishment of the House contentions at nearly every essential point, the exceptions to such a remark being found in two main particulars: (1) the reduction in the number of Reserve Banks and their limitation to not more than twelve at any time, and (2) the provision that public deposits might or might not be made in the Reserve Banks at the discretion of the Secretary of the Treasury.

While other points were significant and important in their way, it can certainly be fairly concluded that on those matters involving important issues of theory the House virtually held its own in most respects. In fact, it is an accurate generalization that the final bill as completed in conference committee and as passed by both Houses was a closer approach to the original House draft of the measure than anything that had intervened during the time the bill was going through the various permutations to which it was subjected in its slow progress from one stage to another of the legislative process.

At one other point there was marked and vital departure from the original House measure—the provision with reference to the refunding of United

States 2 per cent bonds and the treatment of the currency based upon such bonds. On this subject the final action of the conference was nearly equivalent to the acceptance of a plan formulated by the Administration and designed to take the place of all of the various other schemes that had been recommended from different sources in either House. The action as to bonds was, therefore, not a concession by either side but was a virtual surrender by both and an acceptance of the conclusions of the Treasury Department. Barring the two matters already mentioned, the House measure was changed in no respect that affected its essential working; nor could it be said that even in these particulars it had necessarily been subjected to modification, since, in both, the action contemplated by the provisions ultimately adopted was permissive, rather than compulsory.

The Inspiration of the Bill

As to the idea by which the Federal Reserve Act was dominated or upon which it was molded, or as some have termed it the inspiration of the bill, there has been much unnecessary controversy. The measure as originally made ready for introduction was the outgrowth of the long years of discussion of the banking and currency problem through which the country had passed from 1893 onward. The notion of a district reserve system was directly and confessedly drawn from the experience of the banks of the country with local clearing house organizations. Other features were the careful result of foreign experience. While the bill was thus made up of ideas drawn from all available sources so far as these were known to the committee of the House of Representatives, it was prepared as the result of individual study and without the acceptance of outside bills, suggestions or models. It was, in short, honest in its inception, professing to be with all of its various defects simply what it actually was—a measure prepared on the basis of American experience, enlightened and adapted by the use of such lessons as could be drawn from European banking practice. As the writer has said on a former occasion:[3]

> The Federal Reserve Act is the product of a lengthy course of development and has grown gradually out of the discussion and analysis of the past twenty years. It is not drawn, even largely, from any single source, but is the product of comparison, selection, and refinement upon the various materials, ideas and data, rendered available throughout a long course of study and agitation. Many bills embodying the same general line of thought that now finds expression in the new act have been offered in Congress; some have been suggested outside that body. The most fundamental concept of all—that of uniting the banks of the country into organized groups—is found in the clearing house organizations, which in time of stress have pooled their resources and converted bank assets into the equivalent of reserve money. The bills prepared by or under the direction of the Honorable Isidor Straus, the Honorable J. H. Walker, the Honorable Charles A. Fowler, and the Honorable Maurice L. Muhleman have supplied at least the basis for many of the detailed analyses and methods of treatment that are found in the Federal Reserve Act. Earlier than any of these, was the bill recommended by the Indianapolis Monetary Commission, which did not provide for coöperative unions of banks, but upon which the framers of the present act have evidently drawn for some of their ideas.
>
> The latest bill in the long series which was available for study to the framers of the Federal Reserve Act, was that prepared for the National Monetary Commission and called in popular language the "Aldrich bill." By many the new law is regarded as a partial copy of, or plagiarism from, the Aldrich bill; and that view has been widely

[3] *American Economic Review*, loc. cit.

expressed both in and out of Congress. That such was not the opinion of Mr. Aldrich himself, his scathing and bitter denunciation of the House bill seems to bear abundant witness.[4] It might be enough for purposes of argument simply to appeal on this point from the critics of the measure to Mr. Aldrich himself but that would hardly answer the purpose of historical analysis.

The Aldrich bill may be considered from two standpoints, (1) that of its theory and broad general plan on the one hand, and (2) that of its machinery and technique of construction on the other. From the first standpoint, there is no shadow of relationship or similarity between the Federal Reserve Act and the Aldrich bill. From the second, there is at many points a close resemblance. The Aldrich bill provided for a single central "reserve association" with scanty public oversight, with control vested practically wholly in the banks, and with the preponderance of power in the larger institutions which owned stock. It so arranged things as to keep this "reserve association" relatively inactive except upon special occasions of panic or disturbance. It made no direct provision for the shifting of reserves in part from existing banks to the proposed association, but it relied upon inflation due to the placing of bank notes issued by the central association in the reserves of the stockholding banks for protection in time of danger. The new act provides for twelve reserve banks, introduces the principle of local control, calls for strict government oversight, shifts reserves from present correspondent banks to the new institutions, minimizes the influence of the larger banks in directorates, and generally diffuses control instead of centralizing it. It leaves banking, as such, to be practiced by bankers; it vests the control of banking in the hands of government officers. The theory and purpose of the new act are widely different from those of the Aldrich bill. Where the Aldrich proposal veers widely away from the tendencies that have been developed during the preceding ten years of American banking discussion, the Federal Reserve Act closely follows them. Indeed, the Act of 1913 is closer to any one of half a dozen bills of former years than to the Aldrich proposal.

[4] Proceedings of American Academy of Political and Social Science, October, 1913.

The Aldrich-Vreeland Emergency Currency

By Homer Joseph Dodge

Editor, The Federal Trade Information Service[1]

THE origins of everything in the world, from man himself to slang words and phrases, from vast and perfect mechanisms to manners and customs, or great eras and economic cycles, always have held a special fascination. And there has always been someone, whether it be Darwin or the Encyclopaedia Brittanica, to ferret out each firstling.

To point to the circumstances of the origin of the American currency inflation, the progress of which during the last seven years has had so profound an effect upon every branch of our national activity, is not a difficult task. Although inflation of such tremendous proportions previously had been unheard of, the stage was especially set in preparation for that event. As a preliminary to the more serious later currency inflation, the United States had innocently provided itself with a lively springboard from which to leap.

The Forerunner of Inflation

That springboard was the Aldrich-Vreeland Act which provided a sudden

[1] I am indebted to the office of the Comptroller of the Currency for the statistics of the Aldrich-Vreeland note issues.

means for issuing hundreds of millions of dollars in emergency currency. To be sure, it was designed merely to meet temporary needs for additional currency in periods of financial stress. It was intended that this currency should never remain long outstanding, but should merely supply the nation with a currency medium during the brief period required to restore confidence following a market upheaval or similar economic disturbance of known dimensions and experienced intensity. An aggregate of $500,000,000 was provided for this purpose. That a need should develop in this generation for greater sums was undreamt.

The panic of 1907 had been a severe lesson to the American banking fraternity and to the nation as a whole. At that time clearing house certificates had been issued to the extent of $255,536,300—a great sum then—and Congress, intent on providing a preventive against a similar embarrassment, had passed the Aldrich-Vreeland Currency Act, which was approved May 30, 1908. It was regarded as an emergency implement to be supplanted by more solid legislation and, therefore, was to expire by limitation, June 30, 1914. The permanent legislation was provided, for on December 23, 1913, the Federal Reserve Act was approved. The Federal Reserve Banks were not opened, however, until November 16, 1914, so when the European War broke out the permanent system was not ready for operation.

The War was the call-bell for the beginning of the performance of world-wide inflation. The American vehicle of participation was not ready, so Congress brought back, as a curtain-raiser, the Aldrich-Vreeland Emergency Currency Act. It extended the life of the act from June 30, 1914, to June 30, 1915.

WAR DEMAND FOR MONEY

In times of stress of almost any kind, money is the first support on which mankind leans. Availability of ample supplies of money goes far toward alleviating almost any distress. The War had not yet had an opportunity to bring home the lesson that in an economic sense, goods and services, and not money, are the king pins. With the Stock Exchange closing, and banks and business houses and individuals throughout the country in a state of bewilderment over the meaning of the War, everyone wanted money quickly.

Europe instantly began unloading her railroad and industrial securities in this market. Belligerent governments began awarding contracts for war supplies. Prices began to rise, and a thousand new demands for money sprang up. This demand, coupled with a caution on the part of the banks, arising from the native timidity of capital in the presence of great material forces, doubtless would have caused serious embarrassment had it not been for the availability of the Aldrich-Vreeland emergency currency.

A curious fact attendant upon the issuance of this money bears upon the political aspect of the event. The Federal Reserve Act had been widely press-agented to the country as a great achievement of the Democratic Congress. It was a Wilson bill, one of the heralded Democratic reforms. Now the Aldrich-Vreeland Act, as its very name signifies, was the creation of an old-fashioned Republican Congress. It was popularly known that the Federal Reserve Act had been approved; that its machinery was in process of erection. The Aldrich-Vreeland Act was forgotten. Wherefore, when, in response to the demand of the hour, an emergency currency

appeared, it was popularly received as the issue of the new Federal Reserve System. It is not a matter of large importance, but rather a curiosity of financial history, that to this day many business men are under the impression that the emergency currency with which they did business in the first few months of the War was Federal Reserve currency.

At the beginning of the crucial period following the declaration of war in Europe, the general stock of currency in the United States amounted to $3,735,579,397, of which $368,210,467 was held in the Treasury as assets of the government, leaving the amount in circulation at $3,367,368,930. Of the general stock, there was in gold, $1,887,270,664; silver, $748,287,696; United States notes, $349,114,016; and national bank notes, $750,907,021.

On August 1, 1914, the stock of incomplete currency in the custody of the Comptroller of the Currency and available for issue on the security of United States bonds and other securities, was $524,864,470. The aggregate amount of government bonds on deposit to secure circulation, together with the amount of such bonds outstanding and acceptable for that purpose, aggregated $913,317,500, of which the national banks had on deposit to secure circulation, $740,796,910, to secure United States deposits, $23,047,950, and on hand unpledged, $11,950,300. Hence, only about $137,500,000 of the class of United States bonds acceptable as security for circulation were not owned by national banks. This amount, plus $11,955,300, owned but unpledged, or in round amount, $149,500,000, was the measure of the possible increase of national bank circulation on the security of United States bonds.

On August 1, 1914, the outstanding national bank circulation amounted to $750,907,020, of which $735,222,801 was secured by United States bonds, and the remainder, $15,684,220, by lawful money deposited by banks in liquidation and by those that were retiring their circulation. On September 12, 1914, the date of the first report from national banks following the beginning of the European War, the reporting banks had on deposit with the Treasurer of the United States as security for circulation, United States bonds to the amount of $736,685,850. On that date the volume of circulation issuable under the Act of 1908, that is, 125 per cent of the combined capital and surplus of the banks, amounting to $2,230,588,239, less the amount of currency issued on United States bonds, was $1,493,902,390. As a matter of fact, the authorized issues of currency under that Act, from the date of the first issue on August 4, 1914, to the date of the last issue on February 13, 1915, were but $386,444,215, or less than one-fourth of the maximum issuable. The amount authorized included $910,500 secured by state and municipal bonds deposited with the Treasurer of the United States in trust by eight national banks, all other issues being based upon securities deposited with national currency associations.

During the period of activity of issues of circulation under authority of the Act of 1908, the volume of United States bond-secured circulation was practically unchanged. The aggregate amount of outstanding national-bank circulation reached the maximum, during the period in which emergency circulation was issued, in the middle of November, 1914, namely, $1,126,039,600.

Provisions for Retirement of Aldrich-Vreeland Currency

The law authorized the deposit of lawful money or national bank notes for the retirement of this additional or emergency currency. By reason of general conditions and the lack of demand for funds, deposits for retirement of the additional circulation began to be made as early as the middle of October, and by January 2, 1915, aggregated $238,698,460, or over 60 per cent of the total circulation authorized to be issued. Within nine months, that is, by May 1, 1915, $380,039,030 of the authorized $386,444,215 of this currency had been retired, and prior to June 30, 1915, the entire amount issued had been retired except the sum of $200,000, the amount issued to a national bank that failed and was placed in charge of a receiver.

In addition to the securities deposited, the law provided that "the banks and the assets of all banks belonging to the association (national currency), shall be jointly and severally liable to the United States for the retirement of such additional circulation."

The value of the securities deposited with the currency associations, that is, the market value of the state and miscellaneous bonds and the face value of the commercial paper and warehouse receipts, including exchanges, was, roundly stated, $907,880,000 of which $651,146,000 was in commercial paper. The net value of the securities, that is, the gross amount deposited less exchanges, exceeded the value of circulation issued by more than 30 per cent.

Under the provisions of law and the rulings of the Treasury Department, securities deposited were classified as follows:

1. State, municipal, and county bonds were accepted at 85 per cent of the market value.
2. Miscellaneous securities, including industrial bonds, and other securities, mainly city and town notes and warrants, were accepted at 75 per cent of the market value.
3. Commercial paper was accepted at 75 per cent of the face value, and—
4. Notes secured by warehouse receipts for cotton, tobacco, and naval stores at 75 per cent of the face value.

The additional circulation authorized and secured by commercial paper represented 57½ per cent of the total amount authorized; by miscellaneous securities, 28 per cent; by state, county and municipal bonds, 14 per cent; and by notes secured by warehouse receipts, one-half of one per cent.

Activity of National Currency Associations

While there were between 7,500 and 7,600 national banks in active operation during the period in question and 45 national currency associations organized, the membership of these associations was but 2,197, and of that number only 1,363 took out additional circulation. None of the banks in four currency associations, namely, Vermont, Rhode Island, northern New York, and central New York, applied for circulation. All the states of the Union were included in one or more of the currency associations excepting Maine and Wyoming. None of the national banks in nine states, namely, Maine, Vermont, Rhode Island, Delaware, South Dakota, Montana, Wyoming, Idaho and Nevada, applied for additional circulation.

Eighty per cent, or $309,308,210 of the authorized issue of $386,444,215, was for banks in the reserve city

associations. The amount authorized for banks in the National Currency Association of the city of New York was $144,975,960; Boston, $24,944,-500; Chicago, $27,070,000; Philadelphia, $14,883,750; Minneapolis and St. Paul, $12,798,500; Dallas, $11,-337,950; Pittsburgh, $10,978,000; St. Louis, $10,836,500; Cincinnati, $9,592,-500; and San Francisco, $8,634,500.

The tax collected on this additional circulation from August, 1914, to June 30, 1915, was $2,977,066.73.

With the deposit of the requisite amount of lawful money to provide for the retirement of circulation issued under authority of the Act of May 30, 1908, and the release of the securing collateral, the duties of the national currency associations practically terminated, although the associations were held to be in existence until the date of the expiration of the act providing for their formation. The organization of the first national currency association, that of Washington, D. C., was approved July 18, 1908, and the last, the State of Vermont, December 16, 1914.

There were forty-five national currency associations organized with a membership of 2,197 banks, or 29.15 per cent of the total banks (7,538) that reported on the call of September 12, 1914. During the month of August, 1914, 30 associations made their first application for additional circulation, 6 in September, 4 in October; 1 did not report the date of its first application, and 4 associations made no application.

Forty-one associations approved for issue $385,553,905 to 1,366 member banks. The first approval was made on August 3, 1914, and the last on February 5, 1915. The first application for the retirement of circulation was approved September 23, 1914. By July 1, 1915, all of the banks to which currency was issued, with the exception of the First National Bank of Uniontown, Pa., which, upon becoming insolvent, was placed in charge of a receiver, had made the necessary deposit to retire their additional circulation.

The securities pledged with the associations aggregated $585,864,391.94, classified as follows: commercial paper, face value, $359,535,317.27, or 61.37 per cent of the total securities deposited; industrial bonds, par value, $116,069,173.36, or 19.81 per cent; state, municipal and county bonds, par value, $70,010,846.34, or 11.97 per cent; railway bonds, par value, $31,333,800, or 5.37 per cent; other securities, face value, $4,690,366.86, or 0.80 per cent, and warehouse receipts secured by cotton, tobacco, and naval stores, face value, $4,224,-888.11, or 0.72 per cent. The expenses of 41 currency associations, the members of which issued circulation, are reported at approximately $125,000. Two non-issuing associations reported combined expenses, $44.57. The other two non-issuing associations apparently incurred no expense.

DECLINE OF EMERGENCY CURRENCY AND INCREASE IN RESERVE NOTES

The Federal Reserve Banks had opened in the midst of this process, on November 16, 1914. Their machinery was unfamiliar and therefore there was no immediate substitution of the new currency for the Aldrich-Vreeland notes. Retirement of the Aldrich-Vreeland currency, however, set in early. Indeed, the date on which the greatest volume actually was outstanding was prior to the opening of the banks—October 24, 1914. This was due to retirement on the part of banks which had taken care of their emergency requirements and were

getting in shape to carry their own load. That the banking community had not abandoned the emergency currency in favor of the Federal Reserve currency is indicated by the fact that applications for the emergency currency continued to come in and the date on which the maximum approvals took place was not reached until February 13, 1915. By this time retirements of this currency had brought the amount outstanding down to $45,377,141. The period in which the greatest volume was retired was the week ending December 12, 1914, and the amount, $45,144,798.

There was no full replacement by Federal Reserve notes of the Aldrich-Vreeland notes. By January 1, 1915, a total of $238,698,483 of the Aldrich-Vreeland notes had been retired while only $16,530,000 in Federal Reserve notes were in circulation. On April 1, 1915, $372,928,594 of the emergency currency had been retired and only $43,376,000 in Federal Reserve notes were in circulation.

The two curves—one representing the retiring Aldrich-Vreeland notes and the other, the expanding Federal Reserve notes—crossed about March 1, 1915. On March 6, 1915, there were $27,905,376 in Aldrich-Vreeland notes still outstanding. On March 5, 1915, there were $29,805,000 in Federal Reserve notes in circulation.

The previous reporting date for the Aldrich-Vreeland notes was February 27, when there were $32,249,374 outstanding. Compare this with February 26, when there were $26,172,000 in Federal Reserve notes in circulation. The next subsequent reporting date was March 13, when there were $24,357,227 in Aldrich-Vreeland notes outstanding. Compare this with March 12, when $33,965,000 in Federal Reserve notes were outstanding. By June 30, when the last of the Aldrich-Vreeland notes were retired and the Act expired by limitation, there were about $83,000,000 in Federal Reserve notes in circulation.

So it will be seen that the Aldrich-Vreeland currency contracted at a much greater rate than the Federal Reserve currency was issued. This indicates how truly the Aldrich-Vreeland notes were an emergency—a panic currency. They were issued to allay panic or in anticipation of it; the Federal Reserve currency was issued in response to the actual needs of business. A further indication of these contrasting characters is furnished in the fact that applications for new emergency currency continued in substantial volume for a considerable time after the large retirements by the banks which had received supplies; this indicated that the emergency had passed. It is true that there was a heavy tax operating to force the emergency currency into retirement but this alone does not explain the situation. Had it been the tax which caused the Aldrich-Vreeland money to retire so precipitately, the untaxed Federal Reserve currency would have flowed out in greater volume. A year after the Federal Reserve Banks had been opened, the Federal Reserve notes in circulation were only $184,000,000, less by nearly $150,000,000 than the amount of Aldrich-Vreeland currency which had been outstanding a year ago.

These figures are surprising when retrospect brings them in contrast with the $2,500,000,000 in Federal Reserve notes now outstanding and the $3,250,000,000 outstanding a year ago. These figures further show how totally inadequate the maximum of $500,000,000 in Aldrich-Vreeland notes would have been had the act further

been extended and sole reliance placed upon it to provide an additional currency. To be sure, there had been retirement of other classes of currency but not in such fantastic volume as to match the issuance of Federal Reserve notes.

Economists and bankers have learned a great deal about currencies since the days of the Aldrich-Vreeland issues and some rules have been upset. The phenomenon which has caused the most profound amazement has been the persistent vitality of grotesquely inflated currencies in some countries of Europe. The German mark is famous for its depreciation, the Russian ruble, notorious. Both have lost, apparently, practically all calculable relation to metallic reserves, yet they display a lingering vitality and are accepted as being worth something, although as a matter of fact some of them are worth less than the merchandise value of the paper on which they are printed. A meal costs 100,000 rubles in Moscow, yet meals still are bought with rubles. They do circulate. The idea that the image and superscription is a talisman of some value, however much depreciated, endures in the face of accurate knowledge that the sovereignty behind these tokens practically is defunct. The idea of a legal tender has retained a momentum which, although slowed down, is yet perceptible. This fact speaks much for an innate desire on the part of the people to retain an artificial circulating medium.

The Reserve Act in Its Implicit Meaning

By A. D. Welton

Continental and Commercial National Bank, Chicago

A GREAT banking system could conceivably grow up of itself in response to the demands of business. Such a system would be ideal because of its flexibility and freedom of adaptation to the changing requirements of commerce. But no such system ever did grow up or ever will. A business, involving such an element of trust, is necessarily conducted by human agencies and human agencies are uncertain and often dangerous. Government everywhere, in one way or another, is concerned with banking. It is concerned with the Federal Reserve System which has been evolved or built up around a statute known as the Federal Reserve Act, approved December 23, 1913.

A statute, however, is only a first step toward a banking system which is finally made up of operating banks. These are credit and currency machines whose conduct, in accordance with the law, is guided, regulated and controlled by rules, precedents, traditions, habits, customs, decisions and what not.

The mass of this material makes the system. With this view of banking it is easy to understand why the coming of the Federal Reserve Act did not bring with it the repeal of the National Bank Act. The statute known as the National Bank Act might have been repealed but the act itself is only a part of the national banking system. The rules, regulations, precedents, etc., which make up that system, could, and perhaps should, be codified but anything further would bring uncertainties and throw the entire system into confusion.

As a banking system is composed of a variety of things beside a statute, so the statute itself is the product of a variety of plans, purposes, ideas and theories of a wide range. To get a thorough understanding of a system of any kind, of which a statute is the nucleus, some knowledge of the discussion which preceded its formulation and adoption is desirable and perhaps necessary. Certainly, one ambitious to become expertly familiar with the Federal Reserve System would have to study conditions long before December 23, 1913. The purposes and intentions of the framers of the Act are not told in the Act itself. They are concealed in many reports, documents, and in many minds. They cannot all be told in brief space but discussion of a few outstanding points will perhaps be helpful in view of recent criticism of the Reserve System, newly declared distortions of its purposes and misunderstandings of its meaning.

It may be said on all the authority that exists, that the Reserve Banks are not government institutions, that they were not intended to be, and that any interference with their operations, beyond exercise of the powers conferred on the Federal Reserve Board, is perversion of the law and its meaning as understood and expressed by those who formulated it. The Federal Reserve Banks are privately owned institutions. Their stock is all owned by their member banks. The provision of the law that, in case the banks did not subscribe for the necessary amount of stock, individuals and the government could, has never been acted upon.[1]

[1] Act December 23, 1913, § 2–¶ 29 et seq.

It is possibly true that some members of Congress voted for the bill in the belief that it provided for the establishment of government banks, but it is also probably true that more of them believed that, in some way, the bill opened the way for punishing or demolishing that political phantasy —the "Money Trust." However, what congressmen believe is not evidence.

AN AMENDMENT THAT FAILED

It may be recalled that when the Glass-Owen bill was under discussion in the Senate a serious attempt was made to give the government power over the Reserve Banks by giving the Reserve Board or the Secretary of the Treasury power to appoint a majority of the directors of each bank. Senator Hitchcock of Nebraska offered the amendment, which had other supporters. Members of the banking and currency committees of both Houses were opposed to this amendment. They maintained it was out of harmony with the spirit and purpose of the measure. Chairman Glass of the House Committee and Senator Owen of the Senate Committee were showered with telegrams from all parts of the country, urging opposition to this plan. The amendment failed completely.

Another effort was made to give the government, through the Treasury, direct control over the Reserve Board. This effort had insidious features and was redolent of politics. During the Senate discussion of the Glass-Owen bill, new prints of the bill with minor changes were frequent. In one of these there appeared one day in December an alteration of a paragraph in Section 10, which was made to read, as it still reads, as follows:

> Nothing in this Act contained shall be construed as taking away any powers heretofore vested by law in the Secretary of the Treasury which relate to the supervision, management, and control of the Treasury Department and bureaus under such department, and wherever any power vested by this Act in the Federal Reserve Board or the Federal Reserve Agent appears to conflict with the powers of the Secretary of the Treasury, such powers shall be exercised subject to the supervision and control of the Secretary.

The paragraph was innocent enough in appearance. No one seemed interested in it. Chairman Glass, of the House Committee, disclaimed all knowledge of its source, saying the bill had passed from his control. Chairman Owen, of the Senate Committee was non-committal. He thought the suggestion had come from the Treasury. The paragraph was not discussed on the floor. It passed the Conference Committee apparently without notice. Many other provisions were far more important.

Over a year later, a newspaper item made it known that the Attorney-General of the United States had given an opinion to the President to the effect that the Federal Reserve Board was an independent organization and not a bureau of the Treasury Department. When the President's secretary was queried as to the reason for requesting this opinion, he replied that the President had asked it "for Mac" but did not say whether "Mac" was Machiavelli or McAdoo.

It is not impertinent to point out that, when the Federal Farm Loan Act was on passage, the question of whether the Farm Loan Board should or should not be a bureau of the Treasury Department was fought out. Every form of the bill that came from the House Committee made the Farm Loan Board an independent organization. The Senate Committee invariably made it a bureau of the

Treasury Department. The Senate won. The Farm Loan Board is a bureau of the Treasury Department. The Federal Reserve Board is not.

Reserve Board an Independent Organization

The Federal Reserve Board can be classed only as an independent government organization, having supervision over the Federal Reserve Banks and exercising in that field powers defined by law.

The Federal Reserve Banks are privately owned institutions, managed by boards of directors chosen by their stockholders and authorized to function as banks, but within the provisions of law and the rules and regulations made under authority of law by the Federal Reserve Board.

The powers of the Federal Reserve Board are very broad but the great purpose of the law in creating the Board was to conserve the public interest, to provide safeguards against domination over banking by either financial or political interests, and to maintain a sound banking system.

Designed as an Aid to Business

The Federal Reserve System was designed as an aid to business. It is applied only to commercial banking—that form of banking which takes account of the commercial scheme by which commodities are got from producer to consumer. The deposits in commercial banks mark the stored-up purchasing power of the community. Back of their loans are merchantable goods of greater value. Such banks must be liquid. They must pay on demand and their loans must, therefore, be of short maturities. In a general way a loan should run no longer than the estimated time it takes to get the goods behind it to the consumer. In relation to the producer, the jobber may be the consumer; in relation to the jobber, the retailer holds that position; but, in any event, the final consumer must pay because he destroys the goods completely or takes them out of the class of merchantable articles.

Before the Reserve System came to give practical definition to commercial banking, commercial and investment banking were inextricably mixed. The money of commerce in the form of surplus deposits beyond the immediate needs of the owners, or in bank reserves, was drawn to the centers and chiefly to New York where it could be employed in the call loan market: that is, it could be loaned on demand against securities which represent invested capital. That system created all the "Money Trust" that ever existed.

The Federal Reserve System was intended to divorce investment from commercial banking. Notes secured by investment securities are, therefore, ineligible for rediscount. No matter how strong the market demand for such securities, they are not liquid in the sense that commercial bank loans must be liquid. At times they fluctuate widely in price. The call loan rate fluctuates accordingly. In 1907 it reached 125 per cent. An advance in commercial discount rates from 5 to 7 per cent indicates a critical condition in the commercial money market.

The plan to prevent stock market hysteria from affecting commercial business has been reasonably successful. But investment securities have not been kept out of the Reserve Banks. In Section 13, defining paper eligible for rediscount, it is provided that such definition (of eligibility) "shall not include notes, drafts or bills covering merely investments issued or drawn for the purpose of

carrying or trading in stocks, bonds or other investment securities, *except bonds and notes of the Government of the United States.*"

FISCAL AGENTS OF THE GOVERNMENT

The Reserve Banks were intended to be fiscal agents of the government and the exception as to government securities was natural at the time when the World War could not be foreseen. If anyone had thought that the United States would be issuing securities by billions before the Reserve Banks were four years old, it is doubtful if notes secured by government issues would have been made eligible for rediscount so jealous were the framers of the act of the strictly commercial character of the Reserve Banks.

Always uppermost in the minds of those men, both in and out of Congress, was the desire to keep commercial banking and the Reserve Banks free from investment securities. Innumerable proposals have been made for variations from this practice. The trials of war brought many. The farmer's insatiable demand for more capital and credit has been advanced a thousand times. It has been seriously proposed that railroad bonds be recognized as collateral for Reserve Bank loans. The pressure for some departure from the rule has been continual, if not constant.[2]

It is undoubtedly true that many supporters of the Federal Reserve bill in Congress were opposed to investment securities as collateral for notes eligible for rediscount only because of hostility to Wall Street and hatred of the "Money Trust." It is probably true that the distinction between commercial and investment banking was not clear in the minds of all who voted for the bill. But it was clear in the minds of enough. To confine the Reserve System entirely to commercial banking may leave a gap in the banking scheme, but sufficient experience has been had to demonstrate the dangers of any lapse from the integrity of the present plan.

PROTEST AGAINST COMMERCIAL LIMITATIONS ON RESERVE BANKS

The War Finance Corporation was the greatest protest against the commercial limitations imposed on the Reserve Banks. The exigencies of war excused that law, if they did not justify it, but there is substantial ground for the suspicion, if not for the belief, that, underlying the plan for the War Finance Corporation, was the political desire to get for the government some measure of control over investment banking. Many "Money Trust" baiters fondly believed that the Reserve Act would cripple Wall Street. Some thought that control would be given over speculative activities. The War Finance Corporation might have had some such effect if it had functioned to the extent predicted. In its revival as a machine to meet an exigency in which something beyond the maturities permitted for rediscounts under the Reserve Act is necessary, it may fill a temporary need acceptably, but it could not function satisfactorily under other conditions, even if it is conceded that its present operations are satisfactory. On the other hand, it can only be said that, if the Reserve Banks cannot meet every commercial banking need, they are defective. The difficulty lies in determining just what is a commercial banking need. Surely it is not to hold up prices or make up or prevent

[2] The Federal Reserve Board adopted a policy in order to assist in the war financing which was economically unsound. Pages 62 and 63 of the hearings entitled, "Reviving the Activities of the War Finance Corporation."

losses occasioned by cataclysmic disturbances born of war. It is only fair to say that the first duty of commercial banks is to protect themselves. In doing that they protect business. So far as the present operations of the War Finance Corporation protect the commercial banks, the work is probably justified.

SOME THINGS THAT WERE INTENDED

It is not an invitation to controversy to say that the Reserve Act failed to abolish the office of Comptroller of the Currency for two reasons only: one was the political desire to keep the office in existence, and the other, the necessity for retaining temporarily an organization which was familiar with the bank records and had an operating mechanism. Similarly, the Independent Treasury system with numerous subtreasuries was marked for abolition but the work was deferred, as is told elsewhere in this volume.[3]

It was always the plan of the framers of the Reserve Act to secure the ultimate correction of the country's patch-work currency. It was a hard task, and is, with its difficulties increased by the clamors of the many who believe in fiat currency. However, provision is made for the ultimate retirement of both United States notes and national bank currency. A return to stable conditions will permit the execution of these provisions, although little attention has been given them as yet. The purpose of the Act was to give the country ultimately a currency composed of gold and reserve notes, with silver certificates as a sort of necessary evil to supply the demand for small bills. The disappearance of the silver during the War called forth the amendment permitting the issuance of reserve notes and Federal Reserve Bank notes of small denominations. It is hoped that the latter will soon find their way into oblivion.

Reserve Bank notes, of minor consequence in any event, have a significance as a by-product of the note controversy. Like the provision in Section 16 making reserve notes the obligations of the United States—a provision wholly at variance with the spirit of the Act and practically quite meaningless—Federal Reserve Bank notes attested the strength of the "cheap money" element and the desire of the advocates of soundness to avoid a direct test of that strength.

The bond-secured national bank currency and its retirement presented a problem of grave import. It was finally solved by the provisions in Section 18 requiring the Federal Reserve Banks to purchase such bonds, securing circulation, as were offered to the amount defined. Without discussing the methods of refunding and retiring such bonds, it may be said that the fiat money contingent revolted at the idea of having any securities carrying the circulation privilege in the hands of the Reserve Banks without providing a means of issuing notes against them. The means was provided. In due course such notes came into existence. Thus a law which was conceived in the idea that one of its great purposes would be to simplify and unify the currency, actually opened the way for the adding of a new patch and thereby heightening the crazy-quilt effect.

CHECK COLLECTIONS AND NOTE ISSUES

It is in Section 16 under the general title of "Note Issues" that there appears the provision empowering every Federal Reserve Bank to "receive on deposit at par . . . checks and drafts, etc."

[3] See "The Assumption of Treasury Functions by the Federal Reserve Banks."

This and the paragraph which follows were those over which came the bitter controversy between country banks and Federal Reserve authorities. Of the merits or demerits of the arguments which that controversy aroused, nothing need be said here. The only significance for present purposes lies in the fact that "par collections" are provided for in the section devoted to note issues.

Around the question of note issue raged a conflict for many years prior to 1913. The conflict harked back to the Second Bank of the United States, the era when only the states chartered banks and every bank was a bank of issue. It had the savor from Civil War financial struggles; it had been carried through the greenback struggle; it changed its form, not its substance, when free silver was the cry, and it had redivivous whenever elasticity of the circulating medium was mentioned.

The ancient friends of much paper money were reasonably quiet when the advocates of a new banking system talked of the project in terms of bank reserves and credit, but when circulating notes were mentioned they were at home and rampant. Also they had to be dealt with and dealt with kindly and diplomatically. If they should be rubbed against the grain, there was danger that paper currency would be made so pronounced an issue that everything else would be forgotten.

This was the manner of the argument, although argument was a weapon of dubious value in that case: "Checks are the great currency medium through whose use the exchanges of commerce are effected. Elaborate investigation by the Monetary Commission's experts has shown that something between 92 and 98 per cent of all purchases are paid for with checks written against bank deposits. If checks are the chief medium of payment, they serve the purpose of currency which may properly and logically be considered as expressing the same kind of credit in a different form."

The reply to this was that, in such a case, checks should be as good as currency. Certainly they should always be worth par. It was further agreed that elasticity demanded the constant retirement as well as the constant issuance of notes, because checks were instantly cancelled and retired once their work was done. Out of it all came the inclusion of "par collections" in the section on note issues.

However vigorously the subsequent conflict raged, the demonstration of similarity between notes and checks stood secure. The case had been proved, for another purpose perhaps, but proved nevertheless. In vain was it argued that checks are a non-circulating, not a circulating medium. In vain were private rights defended and pleas made that the banker also was worthy of his hire. Par collection stands and perhaps, after all, it was a small price the bankers paid for the relegation of fiat money to the limbo of obscurity.

There have been, of course, many departures from the plans of a reserve system as thought out by its promoters and framers. The making of twelve instead of eight reserve banks, is one instance. In many ways practical experience in operation has overthrown the theories of the system's sponsors. In many others business methods have been gradually altered and habits changed to meet the new banking scheme's requirements. There is much of political interest and much of economic value buried in the history of the struggle for a scientific banking system. A little trip among these buried treasures lets in light on later interpretations of the law. And

despite the tremendous progress made in Reserve Bank operation as the result of war necessities, there were distortions and stretchings of various provisions of the Act. Not yet has there been sufficient experience in times of stable business, to permit a conclusion as to the complete sufficiency of the Reserve System but the foundation has been laid securely. The makers of the law builded well and in the face of very great difficulties.

The Purposes of the Federal Reserve Act as Shown By Its Explicit Provisions

By E. W. KEMMERER
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WHAT were the chief purposes of the framers of the Federal Reserve Act as those purposes are revealed by the explicit provisions of the Act itself? In answering this question it will be well to consider (1) the framework of the Federal Reserve System, namely, its plan of organization and control, and (2) its functions.

The chief contribution made by the framers of the Federal Reserve Act was in the plan of organization they proposed, the functions assigned to the Federal Reserve Banks being essentially the same as those recommended a few years previously for the National Reserve Association of the Aldrich Plan, as well as those of a number of central bank plans still earlier proposed in this country. They are, moreover, not very different from the functions performed by the leading central banks of Europe. In this paper, therefore, attention will be given almost exclusively to the framework of the plan.

REASONS FOR A GROUP OF CENTRAL BANKS

To foreigners who study the Federal Reserve System, the most striking fact about it is that it should have twelve central banks with comparatively few branches, instead of one central bank with many branches. There was nothing like this anywhere else in the world, at the time the Federal Reserve System was created and, so far as I know, there is no historical example of such a group of central banks.

There were two important economic reasons for providing a group of central banks instead of one central bank. These were:

(1) The need of a system that was adaptable to widely different conditions in different parts of an immense country like the United States, with particular reference to rediscount rates, and, (2) the desire to decentralize the control of the American money market in such a way as to weaken New York's alleged domination.

One serious objection to a single central bank in the United States was the difficulty arising from the fact that interest and discount rates for essentially the same kinds of paper usually differed considerably in different parts of the country; rates in the West and South normally ruled higher than those in the Middle West, and rates in the Middle West normally ruled higher than those in New England and the Middle States. It was believed that the establishment by a single bank of

a single rediscount rate applicable throughout the United States to the same kind of paper, would be of little use to New England and the Middle States if the rate were adjusted to the higher level of rates prevailing in the West and South, and that, on the other hand, if the rate were made as low as that prevailing in the East, it would be so attractive to the West and South as to result in a dangerous expansion of the bank's loans in those sections at the expense of the East. In time, of course, such a flow of funds from the East to the West and South would equalize rates throughout the country; but the amounts of capital involved were so great that it was felt that a long period of time would be required to achieve territorial equalization of rates, and the East was not favorably disposed to the drain of its funds to the West and South that such a movement toward equalization seemed to require. The maintenance by a central bank of different discount rates in different parts of the country on the same kind of paper, it was believed, would be politically (and probably also legally) impossible.

Although there were other kinds of desirable adaptability to different economic conditions in different parts of the country, it appeared on close examination that for most purposes sufficient autonomy could not be given to branches of a single central bank to enable them to adapt the character of their services to varying local conditions.

The second reason for preferring a group of banks was the widespread feeling that the banking system of the country was being unduly centralized in New York City, where a very large part of the deposited bank reserves of the country were held and where control was widely believed to be exercised, *sub rosa*, by a handful of so-called Wall Street banks. The Pujo Committee's "Money Trust" investigation had strengthened this popular belief, particularly through the West and South. A single central bank, it was widely believed, would be increasingly dominated by New York, while a group of banks, it was argued, would weaken New York's control by causing the growth of a group of territorially centralized money markets, each of which would handle a large part of the business of its own district, and, to a greater or less extent, would compete with New York for open-market business.

These were the main reasons why the law provided for eight to twelve banks instead of one, and why the New York district was limited to such a small area with a strong Boston district at the northeast and a strong Philadelphia district at the south.

Character of Federal Reserve Board

The proposal that the central governing board of the new system should be composed entirely of government appointees was met by a strong protest throughout the country, particularly from the banking fraternity. It was claimed by many that such a board would inevitably be constituted of inefficient political appointees and would be politically controlled, thereby making the Federal Reserve System the football of politics. Much was made of the claim that the bankers, who presumably would furnish the entire capital of the Federal Reserve Banks and who would be responsible for it to their stockholders and depositors, would have no voice whatever in the appointment of the board which was to control the broad policies of the new banks. This central board of seven men to be appointed exclu-

sively by the President was in striking contrast to the central board proposed by Senator Aldrich. Under his plan the board was to consist of forty-six directors of whom forty-two, including the governor and the two deputy-governors, were to be appointed directly or indirectly by bankers.

Despite the vigorous opposition to the proposal that the central board of the Federal Reserve System be appointed entirely by the President, the proposal was adopted. It should be noted that this board was not to do a banking business. That was to be done exclusively by the twelve banks, six of the nine members of the board of directors of each being elected by the member banks. It was primarily in the field of determining broad questions of policy that the Federal Reserve Board was to function, and in this field, it was claimed, the need was for financial statesmen who would view their problems broadly from the standpoint of public service. This was true because the functions proposed for the Federal Reserve System, like those that had previously been proposed for the National Reserve Association of the Aldrich Plan, were affected with a great public interest. On this subject the writer in 1913, summarizing the conclusions of an address given by him in 1911, said as follows:[1]

> Is not the National Reserve Association too much of a public institution to be so largely controlled by one type of business interest, that is, that of the banking fraternity? We must get away from the prevalent idea that the National Reserve Association is to be principally a bankers' affair just because its capital is to be furnished entirely by banks. We must bear in mind that its public deposits alone will for some time probably exceed its paid-up capital, that the funds which the banks deposit with the Association will be chiefly those which the public has deposited with the banks, and that the paper which the banks rediscount with it will be that of the business community. We must not forget that the National Reserve Association is to have a tremendous public power and responsibility, through its right to fix the bank rate of discount, its power over the foreign exchanges and gold shipments, its right to issue the country's only elastic paper currency, its supervisory power over banks, and its function of holding a large percentage of the country's reserve money, together with the privilege of having its promises to pay, in the form of its deposits and bank notes, counted as lawful reserve money for banks. Now it is possible, although by no means certain, that the interests of bankers as a class and those of the public are identical. It is certain, however, that history furnishes numerous instances in which what the public believed to be its interest and what bankers believed to be theirs were in conflict. One need not go back farther than the last two or three years to find a striking instance of the kind in the United States. I refer to the movement leading to the establishment of the United States postal saving depositories, which was opposed vigorously and almost unanimously by the banking fraternity. It is furthermore true, and perhaps of greater importance, that a large element in the country believes the interests of bankers to be in conflict with those of the general public on a great many vital questions.

Although Congress and the President did not budge an inch in their insistence upon making the Federal Reserve Board an exclusively government board, they threw a sop to the opposition by inserting in the law the provision for a "Federal Advisory Council" of bankers, one member to be selected annually by the board of directors of each Federal Reserve

[1] See "Banking Reform in the United States," *American Economic Review Supplement*, March, 1913, pp. 54 and 55; and "Some Public Aspects of the Aldrich Plan," *Journal of Political Economy*, December, 1911, *pp*. 819–830.

Bank from its own district, making the number of members in the Council equal to the number of Federal Reserve Banks. The relations of this Council to the Federal Reserve Board were to be entirely advisory. Neither voting nor veto power was given to the Council, which was required to meet at least four times a year and oftener, if called by the Federal Reserve Board. Members of the Federal Reserve Board who were to be "on the job" three hundred days in the year, it was generally thought, would not be likely to be greatly influenced as to their own job by a group of advisers coming from widely separated parts of the country who would meet infrequently. Happily during the last year or so, the Advisory Council has belied this expectation.

Federal Reserve Bank Directorates

In its provisions for the directorates of the Federal Reserve Banks, the Act well reveals the purpose of its framers to create a group of federated organizations that at one and the same time would (1) recognize the public's dominant interest in matters of broad policy; would (2) recognize the dominant interest of the banker and the banker's business customer in the narrower banking questions, such as the goodness of the paper against which advances were to be made, the amounts to be loaned individual member banks, the quality of open-market investments, and the like, and would (3) permit of a democratic control among the member banks of this banking business.

Of the nine members of the board of directors, three (including the chairman and the vice-chairman of the board) are Class C directors, who are appointed by the Federal Reserve Board and are directly responsible to that Board. Their salaries are fixed by the Federal Reserve Board, and that Board may suspend Class C directors or remove them from office. These directors are the connecting links between the central Board and the Federal Reserve Bank. They keep the central Board informed as to the developments in each Federal Reserve Bank. It is through them that the Federal Reserve Board exercises its control over the broad policies of the Federal Reserve System and compels the necessary teamwork among the twelve banks.

This same sort of representation and control on the part of the Federal Reserve Board is carried through to the branches of the Federal Reserve Banks, each of which is operated under the supervision of a board of directors "to consist of not more than seven nor less than three directors, of whom a majority of one shall be appointed by the Federal Reserve Bank of the district, and the remaining directors by the Federal Reserve Board."

The other six directors, constituting two-thirds of the board, are elected by the member banks. Their concern is primarily with the banking operations of the bank, notably the character and quantity of its rediscounts and collateral loans for member banks, its open-market operations, its discount rate policy (subject to the approval of the Federal Reserve Board), and the like. Of course, the Class C directors likewise vote on these banking questions.

To every bank loan and to every bank deposit, there are at least two directly interested parties, the bank and the bank's customer. The bank's customer is usually a business man or a business concern (using those terms in their broader meaning). In recognition of this dual interest in most banking operations, the Federal Re-

serve Act provided that, of the six directors who were to be primarily concerned with the direct banking operations of the Federal Reserve Bank, three, known as Class A directors, should "be representatives of the stockholding banks"—as a matter of fact they are practically always bankers—and that the other three, known as Class B directors, should at the time of their election be "actively engaged in their district in commerce, agriculture, or some other industrial pursuit." Here is the recognition of the interest of the non-banking business community in the banking operations of the Federal Reserve Banks.

The purpose of democratizing such control over the Federal Reserve Banks as should be exercised by Class A and Class B directors is seen in the rather unique provisions for the election of directors contained in the Act as originally passed. This Act divided all member banks of each district into three groups, each group containing "as nearly as may be one-third of the aggregate number of the member banks of the district and . . . [to] consist, as nearly as may be, of banks of similar capitalization." Each of these groups was to elect one Class A director and one Class B director, on the democratic plan of "one bank one vote" regardless of the size of the bank. Under this plan the peculiar interests of the small banks, of the middle-sized banks and of the large banks, respectively, were assured representation. The democracy of a plan that gave the same voting power to the bank of $25,000 capital that it gave to the bank of $250,000 capital and to that of $25,000,000 capital made a strong appeal to those who feared "Money Trust" control.

By an act of September 26, 1918, the method of choosing directors was changed through the repeal of the requirement that each of the three groups of banks should "contain as nearly as may be one-third of the aggregate number of the member banks of the district . . ." and the substitution therefor of the provision that "the Federal Reserve Board shall classify the member banks of the district into three general groups or divisions," without placing any restriction whatever upon the number of banks that should be placed in each group. This looked like a step away from the original democratic principle of one bank one vote—a principle followed in the elections of most of the clearing house associations. It clearly increased the power of the Federal Reserve Board over the election of Class A and Class B directors.

How far the original plan of grouping the member banks, for purposes of electing directors, into three approximately equal groups of banks has since been departed from by the Federal Reserve Board in exercising the authority conferred by the above-mentioned amendment, will be seen from the following figures. A week after the amendment had been passed the Board made a reclassification of member banks for the twelve districts, which, when taken by totals for all districts, placed 515 banks or 6.4 per cent of the total number (i.e., 8,099) in group I, the large-bank group; 2,384 banks, or 29.4 of the total, in group II, the middle-sized-bank group; and 5,200 banks, or 64.2 per cent of the total, in group III, the small-sized-bank group. According to this rearrangement, therefore, the 515 largest banks in the respective districts could now elect the same number of Class A and Class B directors that the 5,200 smallest banks could elect, or the same number that the 2,700 largest

banks could previously have elected. There may have been good reasons for this great change in the grouping, increasing the power of the large bank at the expense of the smaller, but, so far as I know, the Federal Reserve Board has given little or no publicity to the change itself or to its reasons for making it. The amendment authorizing the change was passed at the Board's request.

MEMBERSHIP

Membership in the Federal Reserve System was limited to commercial banks and trust companies, showing that the System was expected to function in the field of short-time active business operations rather than in the fields of capital and real estate transactions occupied so largely by savings banks, private banks and investment houses. National banks, operating as they did under Federal charters, were expected to play the game according to the new and improved national rules laid down by the Federal Reserve Act. If they were unwilling to accept these rules they were invited to get out of the national system. State banks and trust companies possessing adequate capitals and conforming in their operations to sound banking practices were permitted and encouraged to become members of the Federal Reserve System. The Act clearly contemplated a large membership of state institutions.

CAPITAL AND DIVIDENDS

It was hoped that enough banks would enter the System from each district to assure an adequate capital for each Federal Reserve Bank, but among bankers the opposition to the Glass-Owen bill had been so pronounced and widespread, and threats had been so frequently expressed by officials of national banks that they would give up their Federal charters and reorganize as state institutions if the Glass-Owen bill in anything like its existing form should become a law, that the framers of the Act undertook to assure the establishment of a Federal Reserve Bank in each district by providing that, if sufficient banks should not join the System, the capital could be subscribed by the public or by the government itself.

In the early stages of the bill through Congress the required stock subscription was based upon the capital of the member banks, but the basis was later changed to capital and surplus, the percentage required being reduced. The distinction between a bank's capital and its surplus is at best a rather arbitrary one and is essentially legal, rather than economic. Had the basis been capital alone, a bank desiring to keep its subscription to Federal Reserve Bank stock low, would have been encouraged to increase its surplus at the expense of its capital.

DISTRIBUTION OF PROFITS

The original Act provided that from the net earnings an annual dividend of six per cent, which should be cumulative, should be paid on the paid-in capital stock; that, of the balance of the net earnings, one-half should be paid into a surplus fund until the surplus should amount to 40 per cent of the *paid-in* capital, and that the remainder should be paid to the United States as a franchise tax. An amendment of March 3, 1919, provided that after the six per cent dividend is paid the whole of the net earnings of each bank shall be carried to surplus until the surplus shall amount to 100 per cent of the *subscribed* capital, and that, after this 100 per cent surplus shall have been accumulated, 10 per cent of the net

earnings, above the dividend charges, shall be transferred to surplus indefinitely. A bank withdrawing from the System receives back the capital it has paid in and any accumulated dividends but cannot take one cent of the accumulated surplus. The two hundred odd millions of surplus already accumulated by the twelve Banks would therefore go to the government should the Banks go out of business.

Net earnings paid to the United States by the Federal Reserve Banks, the law provided, "shall in the discretion of the Secretary, be used to supplement the gold reserve held against outstanding United States notes, or shall be applied to the reduction of the outstanding bonded indebtedness of the United States. . . ."

The significance of these provisions concerning earnings, briefly stated, is apparently as follows: The Federal Reserve Banks are to be administered with primary reference to the public service, and member banks are to receive their returns chiefly in the services rendered them directly by the Federal Reserve Banks and in the safer and more stable financial conditions throughout the country which the Federal Reserve System creates. The desire for large cash profits is to have no influence in determining the policies of the Federal Reserve Banks. Their actuating motives must be found in service to the member banks and, through the banks, to the public. If, incidentally, large profits are realized they must go to the government.

To date the profits of the twelve Federal Reserve Banks have been so large, chiefly as the result of war and post-war demands upon the System, that it seems improbable that the call for the other 3 per cent of stock subscription authorized by the Act will ever be made. On November 9, 1921, the paid-in capital and accumulated surplus of the twelve Federal Reserve Banks was $317,000,000, an amount $28,000,000 greater than 6 per cent of the capital and surplus of all the member banks plus 40 per cent, namely, the maximum capital and surplus contemplated by the Act of 1913 for the twelve Federal Reserve Banks.

When the Federal Reserve Act was passed there was a widespread hope among economists and bankers that any profits accruing to the government through this franchise tax would be used for the first of the two purposes authorized, i.e., "to supplement the gold reserve held against outstanding United States notes." The increase of this reserve by slightly less than $200,000,000 would have been sufficient to transform all of our greenbacks into gold certificates and thus retire from circulation one of the most undesirable elements in our motley collection of paper money. Of the $117,000,000 so far either paid to the government in franchise taxes by the twelve Banks or due and set aside by them for the government, all has been absorbed by the war debt and not a dollar has gone into the building up of the reserve against greenbacks.

Functions of Federal Reserve Banks

As stated at the beginning, the limits of space will permit only a few words concerning the purposes of the Act as revealed in the functions assigned the Federal Reserve Banks. These functions are clearly defined in the Act and their general character is understood by all students of the System. They are, moreover, broadly speaking, the functions performed by central banks throughout the world. Chief among them are the following:

(1) The centralization and mobilization of bank reserves;

(2) The rendering more elastic of bank credit, both bank notes and bank deposits;

(3) The creation of a more efficient and cheaper clearing and collection system for checks;

(4) The improvement of facilities for financing our import and export trade at home, and finally

(5) The providing of a satisfactory depository and fiscal agency for the Federal government.

Reserves are centralized through the requirement that legal reserves of member banks shall consist exclusively of deposits in their respective Federal Reserve Banks. These reserves are largely centralized in the Gold Settlement Fund and the Federal Reserve Agents' Fund, and are rendered mobile through interbank discounts and through open market operations.

Elasticity of circulating credit is obtained through the machinery of rediscounting commercial paper, through direct collateral loans—machinery common to most central banks—and through open-market operations. The old-time stone-wall reserve requirements are done away with, and there is no limit below which a legal reserve cannot now be reduced *provided* the bank concerned is willing to pay the price. An elastic asset bank-note currency is superimposed upon the old rigid bank-note currency, although out of deference to the opinions of certain persons of high political influence in 1913, who believed that the issuance of bank notes was an exercise of the essentially government function of issuing money, the Federal Reserve notes are made to emanate from the government and made subject to a government interest charge, at the discretion of the Federal Reserve Board—a charge that has never been imposed. The Federal Reserve notes therefore, in form, have some of the qualities of government paper money, but, in substance, are almost a pure asset currency possessing a government guaranty, against which contingency the government has made no provision whatever.

When the Glass-Owen bill was before Congress the provisions looking toward the parring of checks through the establishment of an extensive clearing and collection system were widely opposed by bankers, who claimed that they were the work of theorists and visionaries. The subsequent development of this clearing and collection system has gone beyond the dreams of the most visionary of the visionaries of 1913.

The extension of the use of bank acceptances and of dollar exchange in the United States, and the development of a broad and active discount market for paper arising out of foreign trade—objects clearly sought by the Federal Reserve Act—were substantially attained much more rapidly than had been expected, as a result of the dominant position in the world's trade and finance which New York obtained, temporarily at least, through the War.

The movement in the direction of making the Federal Reserve Banks the exclusive depositaries of Federal government funds was checked by our entrance nto the War; but, as a result of the discontinuance of the subtreasuries, the fiscal agency functions of the Federal Reserve System which were enormously enlarged by the War, have since been still further extended.

Political Pressure and the Future of the Federal Reserve System*

By Paul M. Warburg
Member of the Federal Reserve Board 1914–1918

FROM the earliest beginning it was obvious that, in order to be successful, any attempt at a thorough banking reform in the United States would have to approach the subject from two angles: one, from the point of view of pure banking technique, the other, from the point of view of administration. The problem was to devise a plan carrying conviction not only as a sound and effective piece of banking machinery, but also as offering reliable safeguards against any possibility of the control of the system's passing into the hands of either "big business" or the politician. If legislation was to be secured and, indeed, if the future of the system was to be protected, a formula had to be found under which these two elements would be called upon to balance one another. If the new banking system was to remain safe and sound, its administration had to be shielded from the danger of becoming subservient either to business or to politics, and, conversely, safeguards had to be provided against business' or politics' becoming subservient to the new banking system.

From the bare point of view of efficiency and economy, one central bank with a purely business management would undoubtedly have yielded the best results, but from the point of view of what was required in the larger interest of the country, of what was essential in order to prevent the system, once established, from becoming the target of ambitious business men or scheming politicians, maximum efficiency had to be subordinated to maximum safety.

The writer's original plan, "A United Reserve Bank of the United States," proceeded on these lines; so did, subsequently, the Aldrich "National Reserve Association of the United States" and, later on, the Federal Reserve plan. Each of these schemes followed the lines of merging the country's dead gold reserves into one live organization; of building upon this more or less centralized gold an elastic note issue; and having thus centralized the scattered forces of the nation into one organic structure, of once more decentralizing its administration and organization, and circumscribing it far enough to prevent the dangers of abused power and of one-sided control.

The advocates of a pure central bank had to reconcile themselves to a lower banking ideal by surrendering to the political requirements of the case. Conversely, the sworn antagonists of a central banking system had to surrender their political ideal, the gospel of decentralized banking, in order to provide a system that would be workable as a banking proposition.

Thus the Democrats, starting with the thought of a large number of disconnected reserve banks, ended in tying them together into a central banking system, in its essential features not very dissimilar (though differing in many important details) from the Aldrich Plan, which had started at the other end.

Disregarding the question of which

*Adequate treatment of this subject would require more time and study than was possible under the circumstances and more space than could be given in this volume. P. M. W.

side made the largest share of valuable contributions and mistakes and, dealing with the topic simply from the point of view of sincere appreciation of the banking system which we enjoy today, the problem now before us is to examine what remains to be done in order to promote and protect its future.

A study of four years from within the System and of almost four years from without, leads me to think that its gravest danger lies in the gradual ascendency of political influence.

The Federal Reserve System, as such, is based upon the perfectly sound and happy theory of placing the actual management of the Federal Reserve Banks in the hands of boards of directors, the majority of whom are appointed by business men. The direction of the System as a whole, on the other hand, its policies and its supervision, are vested in the Federal Reserve Board, which consists of five members appointed by the President and confirmed by the Senate. These members are appointed for ten-year terms and the Governor and Vice-Governor are designated by the President and serve at his pleasure. The Secretary of the Treasury and the Comptroller of the Currency are members ex officio. The Secretary of the Treasury is Chairman of the Board.

Among the many Presidents, Secretaries of the Treasury, Senators, Congressmen and Comptrollers of the Currency that I have known, there have been good ones and bad ones, some admirably strong and some lamentably weak. And therein lies the danger for the future: As long as there are two ex-officio members of the Board, who are constantly subjected to political pressure; so long as every President has the power to play favorites with Board members by promoting them to the positions of Governor or Vice-Governor or demoting them at will; so long as one or two members may be vulnerable because their terms are about to expire, it can readily be seen how easy, and therefore tempting, it is for the political members to assert their influence, and how unpleasant and unenviable may be the lot of members struggling to preserve their independence and self-respect.

When members of the Board are hounded by senators or congressmen because they do not think it proper to flood the country with easy money, just because elections are coming; or when they refuse to believe that excessive fluctuations in foreign exchanges during the War were due to Wall Street speculation and could be regulated or controlled by the Federal Reserve Board; or when they are viciously criticised because they will not accede to the belief that fake easy money can counteract the effects of overproduction of important staples when a period of reduced world consumption is encountered—it is, at best, not easy to find men of importance willing to make the material sacrifices involved in service of the Federal Reserve Board.

It will become increasingly hopeless, however, to secure such men if some of the defects in the organization of the Board as above described are not promptly removed and the dignity and independence of the office of member are not enhanced. To state it briefly: The Governor and Vice-Governor ought to be elected by the Board itself; or they should serve in rotation, and the office of the Secretary of the Board might, in the latter case, be developed into that of something like a "general manager," or the Governor ought to be designated for the full term of his membership. The Governor ought to be the Chairman of the Board and, instead of the Secretary of the Treasury, who hardly ever has the time to attend Board meetings, the Assistant

Secretary of the Treasury ought to become an ex-offico member of the Board. There should be an additional member of the Board, who should exercise the main functions now resting in the Comptroller of the Currency. The vast powers now vested in the Comptroller are the remnants of an undemocratic, antiquated and dangerous system. Moreover, the present condition has led in the past to costly delays, duplication of work, inefficiency and unbearable irritation. Examinations and rulings concerning banking operations ought to be made by one body and not by two, if a prompt and efficient administration is to be assured. In the past, Board members often have had to wait upon the good graces—or bad graces—of the Comptroller before any headway could be made in important matters. The situation bristled with humiliating and distasteful incidents. It seems ridiculous that the Board should have appeared before Congress with one set of recommendations and the Comptroller, a Board member, with another, often entirely in conflict with the policies of the Board.

Unless the Federal Reserve Board is raised to a position of the greatest possible dignity and men of real strength, independence and knowledge are found to serve upon it in the future, it is to be feared that the System will become the football of politics. A splendid instrument of protection might thus become an element of dangerous disturbance.

This danger is all the more real because of the unfortunate action of the Organization Committee in establishing twelve Federal Reserve Banks instead of beginning with eight, as the Federal Reserve Act had permitted them to do.

The larger the number of Federal Reserve Banks and the greater the consequent decentralization, the more important becomes the Federal Reserve Board as the sole organic link connecting them all. The weaker the single districts and the more disconnected they are, the more difficult, and at times desperate, becomes the task of the Federal Reserve Board to coax or club these autonomous units into prompt and effective coöperation. The Board was planned to be preëminently a supervisory and directive body; excessive decentralization was bound to force it more and more into the exercise of administrative functions, which—for men located at Washington, unable to be in personal close touch with actual business conditions and operations in twelve separate and remote districts—naturally became more bewildering and troublesome than was advisable or necessary.

The fundamental thought of reserve banking is that the idle money of one industry or section should become available for the seasonal requirements of another. Federal Reserve Districts, therefore, which are "all cotton" or "all grain" were from the beginning doomed to fail as independent districts; seasonal requirements were bound to exhaust their loaning power too rapidly. While they could secure assistance through the somewhat clumsy procedure of rediscounting with other Federal Reserve Banks under the direction of the Federal Reserve Board, they generally would be inclined to hesitate to resort to these rediscount operations, inasmuch as they would tend to emphasize the organic weakness or temporary exhaustion of their districts. Unfortunately the Organization Committee disregarded this fundamental principle and the districts of St. Louis, for instance, and its surrounding Federal Reserve districts were delineated with about the same regard for economic questions as were Austria and her so-called Succession

States at Versailles. Owing to this absence of a sufficient diversification of interests and minds, local banking factions and self-centered provincialism have from the beginning played too large a part in framing the boards of directors, the managements and the policies of many of the twelve Federal Reserve Banks, with little understanding of the national questions involved. Much bitter feeling and criticism were caused, particularly in the agricultural sections, by unnecessary and irritating mistakes made in fixing interest charges or in applying ill-advised methods of administration. Whatever anticipatory words or warning in this regard were given to Congress and later to the Organization Committee, unfortunately, have proved only too true, including the prophecy that an excessive number of Federal Reserve Banks would prevent the establishment of large financial centers outside of New York, where important open discount markets could develop.

It is a great loss for the country that at the time of the formulation of the law and the establishment of the System it was impossible to convince the sections involved that a Federal Reserve branch bank could convey the same benefit as a Federal Reserve Bank; indeed, that as a branch of a larger district a region would be better served than as a self-contained district. Minneapolis, as a branch of Chicago, would have been as well provided for as Detroit, but it would enjoy a rate of 5 per cent instead of its present 5½ per cent rate. The same holds good for Dallas and Atlanta.

As stated before, the weaker the Federal Reserve Banks, the stronger must be the Federal Reserve Board. This is all the more essential because the Board appoints the C class directors. The latter often constitute very important elements of safety and must be appointed, political pressure notwithstanding, solely from the point of view of securing the men best qualified for the protection of the Banks. Finally, the future of the local management of all banks, in short, the morale of the entire System, will depend upon the character of the Federal Reserve Board.

If the Federal Reserve System was able to accomplish its phenomenal development and if it could respond so splendidly to the trying demands of the war, and of the post-war periods, it was largely due to the devotion, vision and ability of members of the Federal Reserve Board and of some of the Federal Reserve agents and governors of Federal Reserve Banks, who perfected and developed the System into the extraordinary banking organization it is today. Strong and exceptional men made themselves the leaders of the rest. Without them, the System would have failed. Such men today are still serving the System, though from the material point of view many of them could do vastly better for themselves in other fields. If politics should creep into the Board, these men will gradually drop out, and from top to bottom the System will deteriorate. If the administration of the Federal Reserve System, in Washington and in the banks, should then fall into the hands of weak and incapable men who only see "fat jobs" in the positions, instead of those who today devote themselves to the work at a personal sacrifice because they see in it an opportunity for public service, there are dark days ahead for the country.

Government must exercise an effective control over business in its administration of the Federal Reserve Banks; but this control must be exerted through a Federal Reserve Board comprising men of the highest integrity and efficiency—men who do not seek the

job and would not hesitate to surrender it, if either business or politics should interfere with the independent exercise of their duties for the best advantage of the country as a whole.

If that is to be achieved, and the future of the Federal Reserve System is to be assured, the people themselves must take a hand. They must never fail to rally to the support of these faithful servants when unfairly attacked, and they must not lose any opportunity of showing them that their services are appreciated. If the people do not prove that they honor their leaders and stand by them loyally, what incentive is there for these leaders to hold out?

In a similar manner, Congress must feel that whoever dares to encroach upon the independence of the Federal Reserve System attacks the most sacred treasure of the people. In Washington I came to know many upright men of the very highest type; nevertheless a large number of our political leaders might prefer that the Federal Reserve System be subservient rather than independent. They want open doors for patronage and a ready compliance with the wishes of their constituents.

Protection for the Federal Reserve System must, therefore, not be expected from Washington, unless it is possible to arouse and strengthen the small number of distinguished men in the Administration, and in Congress, who would understand the danger and would fight to ward it off. They will win if the country makes Congress understand that its heart is in it. If the people cease to exercise vigilance, if ever they relax in their insistence upon the integrity of their banking system, it may develop, as it did before, from the greatest blessing into the gravest menace. A Federal Reserve System turned into a political octopus, a national Tammany Hall, would infest not only the counting houses but every farm and hovel in the country.

Early Functioning of the Federal Reserve System

By ARTHUR REYNOLDS

President, Continental and Commercial National Bank of Chicago

ON October 26, 1914, the Secretary of the Treasury sent a message to the twelve Federal Reserve Banks, then organizing, instructing them to begin definite operations on November 16, 1914. Great haste was made to secure adequate quarters and a working staff. One-sixth of the capital stock subscriptions were called on November 2, 1914, and on the sixteenth of November the Banks formally opened for business.

"Regulation in ordinary times, as well as protection in extraordinary times" was the principle laid down by the Federal Reserve Board in its first report after two months of operation, for defining the general scope of activities of the Federal Reserve Banks. There being no extraordinary times to call for the protective function as set forth in the above definition of policy, the operation of the Federal Reserve System during the first two years was confined largely to efforts, first, to "unify the banking system of the country" by seeking new members among the ranks of the state banks; second, to endeavor to regulate interest rates and equalize the demand for

money by the purchase of bills and acceptances in the open market, and third, to establish a par collection system and the clearance of all checks on member banks.

The men charged with the operation of the Federal Reserve System, upon its inception, promptly sought to induce the banks of the country to make full use of its facilities. They were influenced, undoubtedly, by the feeling on their part that it was necessary to keep employed such funds as were entrusted to them in order to pay expenses and to earn dividends upon the capital stock. They felt that member banks should rediscount with the Reserve Banks, and by one means and another endeavored to accomplish this. But in the early history of the System it was destined to meet with no such ready response. The old banking practice of the country had its basis in too many years of actual habit, and it was but natural that banks generally should be hesitant and cautious in making radical changes in their methods; indeed, a great many of them felt that the Federal Reserve Banks, if supported too generously, would ultimately encroach upon and usurp some of the functions of existing banks. They were loath, therefore, to go farther than the mere subscription of capital. It was inevitable that a great many bankers in the country should look upon the System as a government undertaking and fear that transactions with it would be involved in "red tape." They feared also that it would be influenced by politics.

Prejudice Against Rediscounting

Coincident with this, and one of the greatest difficulties in the way of those who were ambitious for the quick acceptance of the System, was the longtime prejudice of bankers against disclosing their borrowings to the public. They had been educated to believe that deposits were the indication of strength, and that borrowed money was a sign of weakness. Any rediscounts or bills payable which they might lodge with the Federal Reserve Banks would appear in their statements, and since, in many instances, they could obtain credit from their city correspondents through methods which did not involve the direct obligation of their banks, and, therefore, did not appear as borrowed money, they were quite content to utilize the credit facilities of those city correspondents. It must be remembered that at this time there were no unusual conditions confronting the country; rates were low and money was easily obtainable. Bankers outside of reserve centers had, over a considerable period of years, built up their relationships with reserve city and central reserve city correspondents. Those who had occasion to borrow for seasonal requirements were intimately acquainted with the city banks which had met their needs. Those banks which had for many years maintained balances with other banks felt that they had a cumulative asset of which they could avail themselves should the occasion arise. There was mutual understanding between correspondents, while the Reserve System was an untried departure.

It will also be remembered that the Federal Reserve Act did not make provision for the turning of all reserve funds over to the Reserve Banks. The change was gradual. Old relations between banks were, therefore, not interrupted.

All of these things militated against the fullest possible functioning of the System in its early stages, and such rediscounts and bills payable as were lodged with the Federal Reserve Banks were largely in the nature of "courtesy transactions" on the part of friendly

bankers who wished to help educate the banking fraternity to use the Federal Reserve facilities.

"Courtesy Transactions"

Comment by the Ninth District Reserve Bank in its report for the year 1915 is illustrative of the general condition confronting all of the Reserve Banks at that time:

> During the latter half of November and the month of December, 1914, such rediscounts as were afforded members were largely courtesy transactions, the greater part representing the efforts of larger banks to acquaint the public with the new Federal Reserve currency. After January 1, 1915 . . . loans dropped to the lowest ebb in many years. Rates on commercial paper took new low levels. . . .

The one great plaint during this time was the non-payment of interest upon balances carried at the Reserve Banks. In the report containing the preceding comment of the Minneapolis bank, Pierre Jay, Federal Reserve agent at New York City, said:

> . . . it is among the country banks as a class that most of the apathy and hostility to the Federal Reserve System which still persists is found. Their opportunities and earnings are relatively small and they must figure closely to live. They feel the loss of interest on reserve deposits; the absence, as yet, of dividends on their capital contributions, and the prospective loss or decrease of the exchange they generally charge on remitting for checks drawn upon them.

The institution of the par collection system met with great disapproval from many banks in the smaller communities where the earnings derived from exchange charges had for many years constituted a comparatively substantial part of the total earnings. Some banks sought to surrender their national bank charters and incorporate as state banks. This was only the forerunner of the more serious opposition encountered when the Reserve Banks undertook to make it compulsory upon all banks to accept their own items at par.

The State Bank Problem

The early attempts to obtain new members from the ranks of the state banks were bitterly opposed in many quarters. Legislation was even resorted to in combating the advances of representatives of the Federal Reserve Banks in this direction. In its second annual report on December 31, 1915, the Federal Reserve Board observed:

> It is an unfortunate fact that, in some of the states, reserve requirements for state banks and trust companies have been materially lowered by legislative enactment since the adoption of the Federal Reserve Act. . . . This is an element of danger in our banking system, because the weakening of the reserves of the state banks and trust companies makes them more vulnerable in times of emergency. . . . It would be deplorable were feelings of state or local pride to lead any of the states into competition with the Federal Reserve System such as would prompt them to lower their own banking standards or reserve requirements with a view of enabling or inducing state banks to refrain from taking membership therein. The Board is satisfied that state banks gain in safety and that states sacrifice none of their prerogatives or powers when such banks become members of the Federal Reserve System, and therefore, expresses the hope that no seeming divergence of interest will be permitted to impede the establishment of higher standards of banking.

Every means was employed to make memberships in the System attractive to state banks and later amendments to the law aided in inducing them to join.

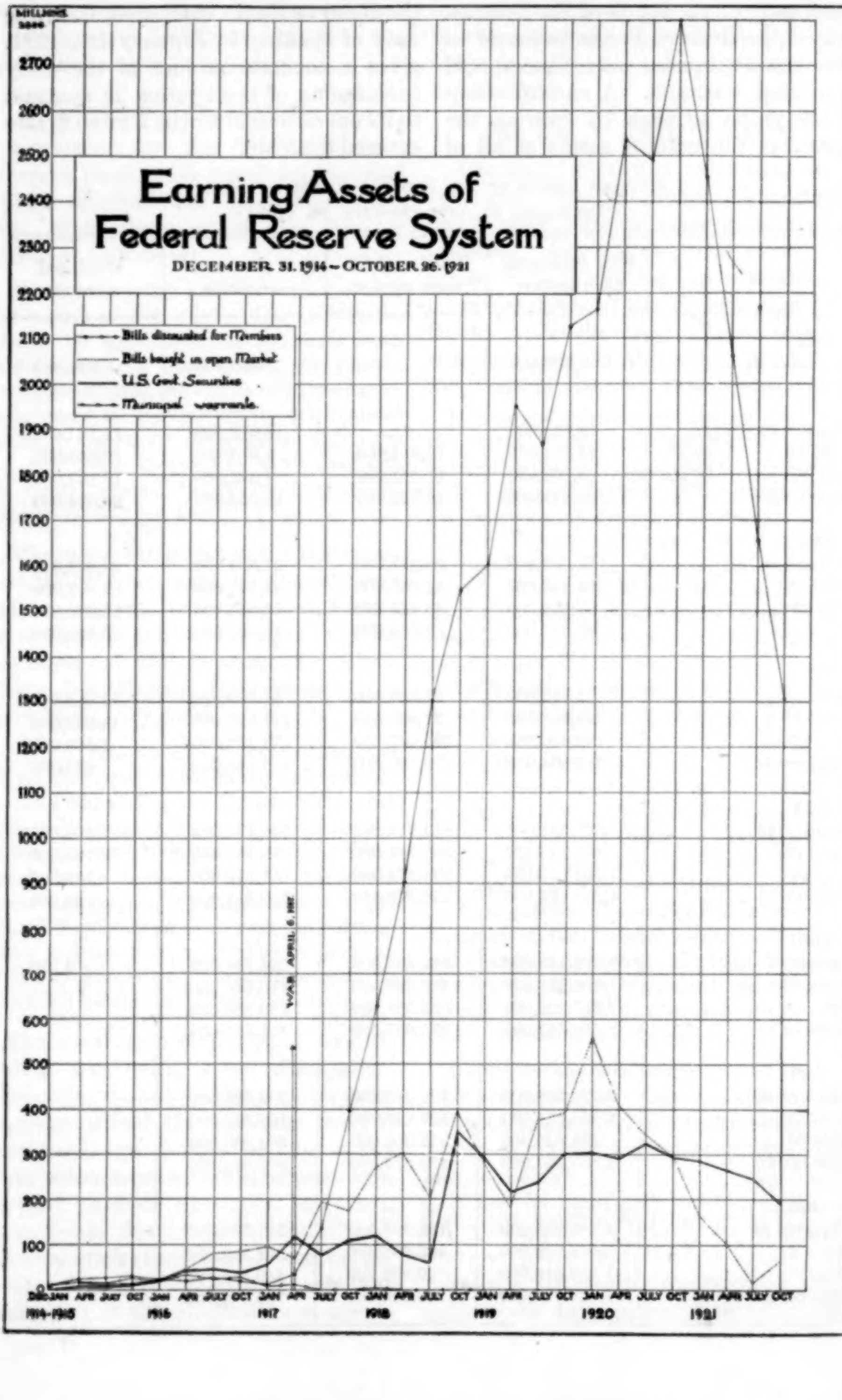
Earning Assets Before and After the War

Failure to secure applications for rediscounts to employ more than a

small part of the funds of the System, caused the Reserve Banks to invest in government bonds, acceptances and municipal warrants. A careful study of the graph on page 78 showing the curves of the earning assets of all of the Reserve Banks combined, from the date of opening to January 1st, 1921, gives a concrete picture of the early functioning of the System in contrast to its operations after the United States entered the War.

Earning Assets of the Federal Reserve System
December 31, 1914–October 26, 1921

Date	Bills discounted for members	Bills bought in open market	U. S. government securities	Municipal warrants
1914				
December 31	9,909,000	....	205,000	734,000
1915				
January 29	13,955,000	....	2,015,000	11,165,000
April 30	22,774,000	13,812,000	6,813,000	18,656,000
July 30	29,102,000	11,625,000	7,923,000	16,107,000
October 29	30,448,000	13,619,000	10,505,000	25,014,000
1916				
January 28	26,901,000	26,314,000	21,372,000	20,602,000
April 28	21,448,000	47,585,000	45,841,000	36,933,000
July 28	27,594,000	83,454,000	48,656,000	27,220,000
October 27	21,131,000	86,085,000	40,469,000	29,890,000
1917				
January 26	15,711,000	97,697,000	55,769,000	12,249,000
April 27	35,043,000	71,400,000	117,818,000	14,999,000
July 27	138,459,000	195,097,000	76,953,000	1,469,000
October 26	397,094,000	177,590,000	110,042,000	233,000
1918				
January 25	627,632,000	273,912,000	123,194,000	4,902,000
April 26	901,743,000	302,844,000	78,853,000	2,722,000
July 26	1,302,151,000	205,274,000	57,012,000	103,000
October 25	1,546,164,000	398,623,000	350,311,000	24,000
1919				
January 31	1,601,128,000	281,293,000	294,784,000	4,000
April 25	1,950,412,000	185,822,000	218,636,000	....
July 25	1,867,602,000	375,556,000	239,400,000	....
October 31	2,128,547,000	394,355,000	301,254,000	....
1920				
January 30	2,174,357,000	561,313,000	303,521,000	....
April 30	2,535,071,000	407,247,000	293,514,000	....
July 30	2,491,630,000	345,305,000	325,380,000	....
October 29	2,801,297,000	298,375,000	296,371,000	....
1921				
January 28	2,456,475,000	165,058,000	287,320,000	....
April 27	2,063,739,000	103,609,000	267,792,000	....
July 27	1,650,496,000	19,424,000	249,488,000	....
October 26	1,308,749,000	62,326,000	190,946,000	....



Earning Assets of
Federal Reserve System
DECEMBER 31. 1914 – OCTOBER 26. 1921
Bills discounted for Members
Bills bought in open Market
U.S. Govt. Securities
Municipal warrants
MILLIONS
2700
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
WAR APRIL 6, 1917
DEC JAN APR JULY OCT JAN APR JULY OCT JAN APR JULY OCT JAN APR JULY OCT JAN APR JULY OCT JAN APR JULY OCT JAN APR JULY OCT
1914-1915
1916
1917
1918
1919
1920
1921

The chart of the earning assets of the System demonstrates clearly that once the exigencies of the war period arose, there was no hesitancy upon the part of member banks to make heavy demands upon the facilities of the reserve banks. Indeed, as the momentum gained force, many bankers in their eager rush to meet the requirements of their customers lost sight of the earlier scruples concerning borrowed money and the pendulum swung to the other extreme. Instead of seeking rediscounts the officials of the System found themselves striving to conserve the financial resources of the country.

The general impression prevails that the War caused a development of the Federal Reserve Banks during the seven years of their operation that probably would not have occurred in many times that number of years under other circumstances. Study of the early functioning of the System bears out that assumption. The early operations of the banks also call to mind the point that they were less far-reaching in their influence. Business getting efforts are forgot or nearly forgot. But what was, may, perhaps, merely presage what is to come. Under stable conditions, the Reserve Banks may make smaller profits, but they will not serve a less useful purpose. Commercial banking must respond to and reflect the activities of business. In times of great activity, whether seasonal or cyclical, the Reserve Banks will be called upon to meet a corresponding demand. In the usual process of business they will have recourse to open-market operations. Through these operations they may exert a great and important influence on the commercial banks, on interest rates and on business activity.

The Federal Reserve System, State Banks and Par Collections

By Pierre Jay

Chairman and Federal Reserve Agent, Federal Reserve Bank of New York

Full accomplishment of the purpose of the Federal Reserve Act, to provide a means whereby the strength and resources of the numerous independent banks of the United States would be made effective for concerted or coöperative action for the protection of the banking system and the service of the nation's commerce, industry and agriculture, depended upon membership of a very considerable proportion of the banks of the country. The provision of the Act making membership compulsory for national banks, brought at once into the System about 7,600 national banks with capital and surplus of $1,788,000,000 and total resources of $11,492,000,000, thus giving a membership at the outset comprising 42.6 per cent of the total banking resources of the country. But the provision for the admission of state institutions was merely to the effect that they might, upon application, be permitted to become members, subject to regulations of the Federal Reserve Board, and should then have the rights and privileges of other member banks.

State Institutions Slow to Join

Contrary to general expectation, the problem of state bank membership was found complicated. Most of the state

institutions were either passive or opposed to the plan of the Federal Reserve System. At any rate, they were not disposed to seek membership therein. The number of such members at the close of 1916 was thirty-seven, of which only seven had a capital and surplus of over $1,000,000. In 1917, however, an amendment to the Act gave the state institutions assurance by statute, instead of by mere regulation of the Federal Reserve Board, that as members they might continue to carry on their banking business in substantially the same manner as they had previously done. It also gave them the definite right to withdraw from the System upon six months' notice.

Coincident with the legislative removal of obstacles to membership, the entrance of the United States into the World War gave a new and very strong impetus toward membership. The necessity of strengthening the banking system of the country to the maximum degree possible, in order to meet the strain of war financing, led President Wilson in the autumn of 1917 to make a strong appeal to state banking institutions to join the Federal Reserve System. The officers of Federal Reserve Banks, pursuant to what they believed to be their duty in the circumstances, carried the appeal to the individual institutions, without, however, bringing pressure upon them to join. Many of the more important ones responded and during the fall of 1917 and the first half of 1918, a considerable number of state institutions throughout the country became members. The movement was particularly noteworthy with respect to the aggregate of resources which thus augmented the strength of the System. The major portion of the large institutions in New York City entered the System promptly, and the close of the year 1917 found the System with a state bank and trust company membership of 250, having aggregate capital and surplus of $520,000,000, and aggregate resources of about $5,000,000,000. At the end of 1918, 936 state institutions were members with total resources of over $7,000,000,000.

Membership Shows Continued Increase Since the War

With the end of the War naturally came a slowing down of the efforts of the Reserve Banks to convince state institutions of the importance of taking membership in the Federal Reserve System, and during the past year such efforts have been practically discontinued. But there has been, nevertheless, a continuous and substantial movement of state institutions into the System. The laws of many states contained provisions concerning reserves, character of investments or other vital matters which have hindered or prevented institutions in those states from taking membership in the System, and, as these obstacles have from time to time been removed, more and more state institutions have taken advantage of the opportunity to join. Many states, for example, have now passed laws providing that a state institution, becoming a member of the Federal Reserve System, need keep only the legal reserves required by the Federal Reserve Act. The influence of this factor is strikingly illustrated in California where 61 institutions with total resources of $1,110,000,000 have become members in the eighteen months following the amendment of the state law in respect to reserves to be carried by member banks.

Present Membership of State Institutions

Some of the state institutions which became members during the war

period, did so with the intention of withdrawing at the end of the War, but their experience as members was evidently such that they did not deem it necessary to carry out this intention, for up to the present time only 37 with resources of $34,500,000 have withdrawn from the System. On the other hand, the number of such members has steadily increased and now amounts to 1,625, with total resources of $9,959,000,000, giving to the System a membership which now represents, it is estimated, about 69 per cent of the commercial banking resources of the country. Approximately 9,000 state institutions with aggregate resources of some $9,000,000,000, not now members, are eligible for membership, from which it appears that 53 per cent of the resources and 15 per cent of the numbers of the eligible state institutions are now in the System. The distribution of state bank membership by districts, is as follows:

Distribution of State Bank Membership by Districts

District	*Number*	*Capital*	*Surplus* (*In thousands of dollars*)	*Total Resources*
1. Boston	41	36,411	38,951	709,890
2. New York	134	187,255	190,561	3,903,409
3. Philadelphia	48	25,821	48,738	390,902
4. Cleveland	113	64,436	79,344	1,041,392
5. Richmond	62	15,160	9,798	152,271
6. Atlanta	116	27,025	17,271	323,928
7. Chicago	364	101,012	85,002	1,753,034
8. St. Louis	102	30,203	22,081	400,809
9. Minneapolis	133	10,747	3,994	126,369
10. Kansas City	60	13,335	4,272	178,032
11. Dallas	205	16,500	6,598	128,288
12. San Francisco	217	57,625	25,218	900,811
[1] Total	1,595	585,530	531,918	10,009,135

[1] Latest available itemized figures.

Attitude of Non-member Institutions

Banking is essentially one of the most conservative of callings, and it is not surprising that there are many state institutions which have not as yet entered the Federal Reserve System and whose not having done so may be ascribed probably to two main causes:

1. The belief that membership in the System involves burdens or expense disproportionate to the advantages received in return, some of which, such as the avoidance of the old-fashioned money panic and the stabilization of banking conditions, they enjoy without membership. The fact that the Federal Reserve Banks do not pay interest on deposits whereas their city correspondents and reserve agents do pay interest on deposits is one of the apparent expenses which they fear to assume.

2. Opposition to the plan of par check collection which the System has established and developed.

Experience of Member Institutions

Most members of the System are now convinced that membership does not involve a burden or expense to a member bank, but, on the contrary, enables it to conduct its business in a more economical and efficient manner, entirely irrespective of the advantage of the rediscount facilities. The loss of interest is offset by the reduction in the amount of reserve which member banks were required to carry. For example, a so-called country bank

under the National Bank Act formerly carried a reserve against both demand and time deposits of 15 per cent, of which 9 per cent might be on deposit with approved reserve agents, and at least 6 per cent must be held as cash in vault. Assuming deposits of $1,000,000, all payable on demand, the bank would carry in vault at least $60,000, upon which it would earn nothing, and with correspondents, $90,000 upon which it would probably receive interest at 2 per cent, or $1,800 a year. The Federal Reserve Act reduced the bank's reserve requirement to 12 per cent, or $120,000, on which it would receive no interest, but which would give it the opportunity to loan the $30,000 released, say at 6 per cent, which would yield $1,800 and thus compensate for elimination of interest on the reserve balance.

In 1917 the required reserve against demand deposits was reduced to 7 per cent, all of which was to be carried with the Reserve Bank and with no fixed requirement for vault reserve. Experience shows that this has permitted an average reduction in country bank vault cash of around 4 per cent, which, together with the reduction of the required reserve against time deposits to 3 per cent, made still greater the compensating advantage due to lowered reserves. Most of the states have passed laws permitting state institutions becoming members to take advantage of these reduced requirements.

With the certainty of being able to obtain cash by rediscounting at the Federal Reserve Bank, member banks have felt justified in investing their funds more closely, carrying as their emergency reserve, bankers' acceptances, commercial paper, or government obligations which could be realized upon at any time, and thus increasing their earning power.

The opposition to the System on account of the establishment of its par collection plan will be discussed incidentally in the following topic. But it may be said that members have found that the use of the check collection facilities of the System has reduced the length of time required for the collection of checks, and enabled them to close out many accounts formerly required, thus further increasing the proportion of their assets which may be invested.

Check Collection Before the Reserve System

An important feature of banking in the United States is the extent to which the use of bank checks has been developed. They are the most usual means of settlement in all classes of business, from the payment of small household bills to payments for the largest transactions of commerce and finance. The presentation and collection of the myriads of checks arising in the course of daily business, and drawn upon over 30,000 independent banks located in all parts of the country, creates a problem of great magnitude, especially as checks are commonly used to settle accounts not only in the places where they are payable, but are sent to distant points, making necessary the use of the mails for their collection.

Before the establishment of the Federal Reserve System, the collection of checks in this country was accomplished by special arrangements between commercial banks. It was customary for banks in the country and in the smaller cities having checks on out-of-town points, to send all such checks to their city correspondent, which would undertake their collection in consideration of the balances carried by the smaller bank with the city institution. It was customary, also, for the country bank to charge the

amount to its correspondent as soon as the letter was mailed, and to treat it at once as part of its legal reserve, this being permissible under the provisions of the then existing law. The city bank to which the checks were sent, having similar arrangements with many correspondents, was the recipient of a very large volume of checks for collection and inasmuch as it had usually undertaken to collect these checks without charge, it was itself under the necessity of finding a means of collecting them with as little cost as possible. The obvious and simple method of sending the checks direct to the banks upon which they were drawn was not attractive because of the fact that the custom had grown up in many, though not all, sections of the country for the smaller banks which received checks on themselves through the mail, to make a charge for remitting to the sending bank for such checks, the rate of the charge varying with different institutions and running from \$1 per thousand dollars, to as high as \$3.50 per thousand dollars in some cases.

This charge was known as "exchange," and was made on the theory that the bank paying the checks performed a service for the bank from which the checks had been received in paying the latter with a draft on a bank in some large center. The value of this service was based upon the approximate cost of making shipment of currency to make the payment, plus postage and stationery, on the theory that payment of a bank check can be demanded only at the bank's counter, and that if remittance is made to a distant point, an additional service is performed. In order to avoid, so far as possible, the necessity of paying "exchange" for the collection of checks, it was usual for banks receiving checks from their correspondents to send them on to some other bank for deposit and collection, charging the remittance to the latter's account, and treating it at once as legal reserve. This effort to find a means of getting the check paid without deduction for exchange, led to checks' reaching their place of payment by very circuitous routes with much delay in the time of presentation and collection, and with increased risk of loss to the indorsers of the checks. By this means, also, the same check might be counted as reserve at the same time by several different banks, although as a matter of sound banking principle, it should not have been counted as reserve for any bank until actually collected.

These unsatisfactory check-collection practices, and the fact that the charges made, as well as the loss due to slowness in collection, fell on the commerce and industry of the country, led to action by Congress which, in passing the Federal Reserve Act, included provisions requiring Federal Reserve Banks to receive on deposit at par from member banks or from Federal Reserve Banks, checks or drafts drawn on any of their depositors, and authorizing them to receive for purposes of exchange or collection, checks or drafts payable upon presentation within their districts. The Act also authorized the Federal Reserve Board to require each Federal Reserve Bank to exercise the functions of a clearing house for its member banks.

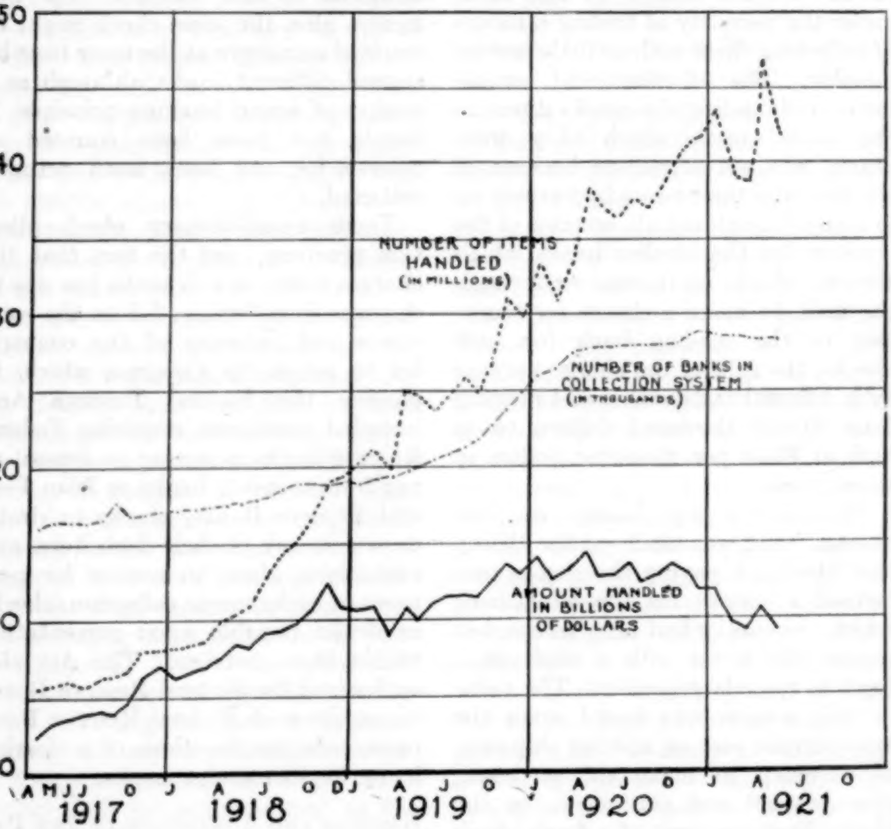
GROWTH AND ADVANTAGE OF THE PAR COLLECTION SYSTEM

The Federal Reserve Banks did not at once actively engage in the collection of checks under the provisions of the law above referred to, because the development of a comprehensive check-clearing plan presented many difficulties, and it was not until July, 1916,

that active operations were initiated. At that time a plan of operation was adopted which, recognizing that checks are payable at the counter of the paying bank, provided that the Federal Reserve Banks, in forwarding checks to a bank for payment by remittance, would pay the cost of currency shipped in payment for the checks, whenever the paying bank elected to make payment in that way, and would also under certain conditions, especially for non-member banks, supply necessary postage and stationery, thus eliminating the elements of cost, which would otherwise fall upon the bank making the remittance, and making presentation through the mail equivalent to presentation at the bank's counter.

Operations under this plan have been highly successful, as will be gathered from the following chart showing the number and amount of items handled each month by the Reserve Banks, and the number of banks in the collection system.

GROWTH OF FEDERAL RESERVE COLLECTION SYSTEM
(By units of one month)



The importance and desirability of the check-collection system which has developed and is now being operated by the Federal Reserve Banks, may be inferred from the extent to which the chart showing the volume of checks handled indicates that these facilities are being availed of by banks

which are members of the Federal Reserve System. They are also being availed of indirectly by non-members. The volume of items handled has grown steadily since the initiation of this method of check collection, until at the present time it may fairly be said that an overwhelming majority of all out-of-town checks handled by banks are collected through the agency of the Federal Reserve System. The Federal Reserve check-collection system has reduced the average time of collection about one-half, by the practice of the Reserve Banks of sending checks direct to the paying bank, if within the same district, or through a Federal Reserve Bank or branch if outside the district.

Opposition to Par Collections

It is not to be supposed that the system eliminating "exchange" and bringing about the par collection of checks should have developed so generally without encountering serious opposition from banks which had formerly received substantial income from their exchange charges. A committee of the American Bankers Association has from time to time during the past five years been endeavoring to secure legislation from Congress which would permit banks to charge exchange against the Federal Reserve Banks. Not having been successful in this, banks in Georgia, Kentucky and Oregon have brought suits to prevent the Federal Reserve Banks from presenting checks at the counters of state banks and a number of the southern states have passed laws designed to prevent the Federal Reserve Banks from collecting at par checks drawn on state institutions.

Cost of Collecting Reduced

The effect of the development of this efficient system of check collection has been to obtain for the business interests of the country a much more prompt collection of checks than formerly, reducing the risk of loss through bad checks and reducing the amount of credit which sellers of goods formerly had to extend involuntarily during the very substantial time required to collect checks. There has been, moreover, an important direct reduction in the cost of collecting checks due to the removal of the so-called "exchange" charge, or the charge made by banks for remitting in payment of checks drawn on themselves, so that at the present time a very large proportion of the country's checks are collected without charge. The change which has taken place in the schedule of charges for the collection of checks may be illustrated by the reductions made by the New York Clearing House Association.

Before the passage of the Federal Reserve Act the charges made by New York banks for collecting checks on outside points were discretionary as to less than thirty cities and were fixed at $1 per $1,000 for nearby states and $2.50 per $1,000 for the more distant states. The rate of charge is now discretionary (which means that in most cases no charge is made) for eleven entire states and the District of Columbia, 25¢ per $1,000 for one state, 50¢ per $1,000 for thirteen states and $1 per thousand for twenty-three states, while twenty-eight important cities in which Federal Reserve Banks or branches are located are collectible at rates lower than those quoted for the remainder of their states.

It should be understood that the present charge made by the New York banks is not an "exchange" charge at all but is made to cover interest on funds, for which credit is given at time of deposit, for the time which will elapse before the items have been actually

collected. The former charge included not only this element but also an amount designed to enable the city bank to pay the deductions of "exchange" made by paying banks elsewhere.

TRANSFERS OF FUNDS

The elimination of seasonal and other variations in the level of domestic exchange between different parts of the country has also been accomplished as a necessary accompaniment to the development of the check-collection system, since in order that each Federal Reserve Bank might freely handle checks on other Federal Reserve districts, it was necessary to provide a means whereby the balances arising between the districts might be settled without the expense of gold or currency shipments. To meet this need there was established in 1915 a Gold Settlement Fund, made up of gold deposited by the twelve Federal Reserve Banks with the United States Treasury, ownership being transferred from one Reserve Bank to another as the need arises to settle obligations between them. The books are kept by the Federal Reserve Board at Washington, and the settlements of all obligations arising among the Federal Reserve Banks are made by book entry, thus obviating the necessity for inter-district shipment of gold. The Gold Settlement Fund has also made collected funds, that is, funds on deposit with banks in any part of the country, readily transferable to any other center without discount, either by use of the check-collection system or, if the funds are on deposit with a member bank, by telegraphic transfer through the Federal Reserve Banks, it being the custom of the Reserve Banks to handle these transfers over their inter-communicating private wire and without cost to the member banks concerned. The importance of the wire transfer facility may be inferred from the following figures, showing telegraphic transfers handled by the New York Reserve Bank during the years 1916–1920:

	Number	*Amount*
1916	2,971	$485,000,000
1917	10,302	6,768,000,000
1918	39,099	19,384,000,000
1919	82,321	18,245,000,000
1920	147,302	17,022,000,000

The settlement of obligations between districts has thus been made so easy, that there is no longer any occasion for premium or discount on the transfer of actually collected funds between different parts of the country.

A most important result of the development of this check-collection plan is the lessening of the possibility of breakdown in the operations of the country's check-collection system. It will be recalled that, in the panic of 1907, a situation arose in which it was impossible to get cash returns on checks sent for collection to banks in certain centers, and that the machinery of check collection and domestic exchange practically broke down. Such a development is extremely unlikely under the operation of the Federal Reserve check-collection system supported by the borrowing facilities which the Federal Reserve System makes available to member banks, and which should enable solvent banks, even in time of severe crisis, to make payment for checks which may be drawn upon them.

The Federal Reserve check-collection system, in short, provides the machinery necessary to accomplish with maximum efficiency the necessary function of presenting and collecting any number of bank checks which may result from the use of this most convenient instrument in the settling of transactions of every kind.

Relations of Reserve Banks to Member Banks and Inter-Relations of Federal Reserve Banks

By R. M. GIDNEY
Controller at Large, Federal Reserve Bank of New York

THE outstanding characteristic of the American banking system—a tremendous number of practically independent banks, great and small—does not make for concerted, uniform or effective action in dealing with banking, credit and currency problems on a nation-wide scale and in a broad way. The need for means whereby these numerous independent banks could coöperate for mutual protection and for greater service to the commerce, industry and agriculture of the country, has long been recognized by students of American banking organization and methods.

The solution suggested by the experience of other countries which have highly developed systems of branch banking supported by great central banks, has never seemed acceptable to the American public. The form of organization adopted to supply the elements formerly lacking in American banking, was necessarily designed to do so without diminishing or impairing the independence of the existing banking institutions. The Federal Reserve System was created to enable member banks, while operating independently as before, to mobilize or unite their reserve funds and make them more available to meet demands for increased credit accommodation or gold withdrawals for domestic purposes or export. The Federal Reserve Banks were to be supplementary to an already existing system consisting of some 7,500 national banks and over 19,000 state institutions, a very considerable proportion of these institutions being expected to take membership and thus give to the system the support necessary to make it a going concern, capable of affording to its members the facilities and advantages which it was expected to create. The provision for compulsory membership of over 7,500 national banks then in existence give assurance of ample support at the outset.

The purpose, then, of the Federal Reserve System was to make possible the association of the banks of the country in order to supply the elements of mutual protection, service and facilities which our system of independent banks had lacked, and, in its essential features, it may briefly and accurately be described as a great coöperative banking association. It includes at this time about 8,200 national banks, and 1,625 state banks and trust companies. The latter have become members voluntarily under the permissive provision of the Federal Reserve Act.

RESERVE BANKS ARE PRIVATE CORPORATIONS

The circumstances attending the creation of the Federal Reserve System and the distinctly governmental character of the procedure which brought it into existence, have tended to create the impression that the Federal Reserve System is a purely governmental agency, an impression strengthened by the highly important work done by the Federal Reserve Banks acting as fiscal agents of the government in selling and handling government securities during

and since the War. The fact is, however, that the twelve Federal Reserve Banks are private corporations organized under an Act of Congress, their only stockholders being the member banks whose stock subscription is proportionate to their capital and surplus. Their operations are directed by twelve boards of directors. Two-thirds of the members of each board are elected by the member banks, and one-third are appointed by the Federal Reserve Board. Each Federal Reserve Bank is thus operated under the control of a board of directors including three government representatives, most of whom are business men, three bankers and three men engaged in commerce, industry or agriculture, but not connected as officer or director with any bank. The directorates of the Federal Reserve Banks include not only bankers, but also men experienced and successful in various lines of business, industry or agriculture. This feature of the relationship between the Federal Reserve Banks and their members is worthy of emphasis. It should be understood that the member banks, through their right to two-thirds of the directors of the Federal Reserve Banks, are in control of the actual operations of the Federal Reserve Banks, subject to supervision by the Federal Reserve Board.

Relations between Federal Reserve Banks and their members have grown to be very much like relations between the larger banks of the country and their out-of-town correspondents. The member bank stockholders of the Federal Reserve Banks use these Banks as depositaries for their legal reserves in amounts determined by law, thus bringing about the mobilization of banking reserves contemplated by the Federal Reserve Act, and furnishing the Federal Reserve Banks with the funds which are the basis for their operations. These relations constitute the minimum which may exist between the Federal Reserve Banks and their members. For some time after the organization of the Federal Reserve Banks, a very large proportion of the member banks did not transact any business through them, and relations were only of the bare minimum above described.

The relationship now existing between the Federal Reserve Banks and their members is the result of evolution and is far closer than in the earlier days of the System. The attitude of the national bank officers whose institutions were practically drafted into the Federal Reserve System at the time of its establishment, was then not altogether friendly, and many of them were strongly antagonistic to the new System and openly expressed their intention to have as little to do with it as possible. These bankers had a natural reluctance to break or impair long established ties, and felt that the Reserve Banks would be in a sense government bureaus and would adopt methods involving red tape and affording little opportunity for close and sympathetic personal relations. Many believed that member banks, especially those in the smaller places, would have little paper of a character eligible for rediscount, and that as they would be obliged to continue to carry reserves with their correspondents, membership in the System would be more of a burden than a privilege.

Those entrusted with the management of the Federal Reserve System, appreciating and understanding the attitude of the member banks, realized that upon them devolved the duty of so conducting the Federal Reserve Banks as to disarm criticism and to make the service of the Reserve Banks to their members so satisfactory and convenient that those who had antici-

pated unpleasant relations would be obliged to revise their opinions. Notwithstanding this forward-looking attitude on the part of the managers of the Federal Reserve System, progress toward closer relations with member banks was slow, and did not become really appreciable until the pressure of problems connected with war financing in 1917 brought about a fuller utilization by member banks of the facilities of the Federal Reserve System and consequently a better understanding of its possibilities for service.

WAR LOANS A CEMENTING FACTOR

To the Federal Reserve Banks was given the great task of organizing in their respective districts distributing agencies for the huge loans which the government found it necessary to float and for this undertaking the aid and support of bankers, both member and non-member, was sought and obtained. The splendid efforts of those associated in this work may be inferred from results. The close relationship thus developed and the splendid coöperation of the bankers with the Federal Reserve Banks in placing the government's loans, made for understanding and mutual appreciation between the Reserve Banks and their members to such an extent that long before the work of government financing had ceased to require the most active efforts of those engaged in it, the attitude of the member banks had changed from passive toleration or outspoken antagonism, to an attitude on the part of the majority of the member banks distinctly friendly to the Federal Reserve System.

With war-time activity, came demand for credit expansion which brought into play the loaning function of the Federal Reserve Banks. Member banks which had been skeptical of the value of the Federal Reserve System and had doubted the necessity for its existence, found themselves obliged to borrow if they were to do their part in war finance, and for the first time a convincing illustration of the value of the loaning activities of the Reserve Banks was given. Member banks soon found that borrowing at Reserve Banks did not involve unnecessary formality or red tape, as the loan policies of the Reserve Banks have in general been along very liberal lines. Loan applications have uniformly been acted upon promptly on day of receipt, so that a member bank sending in paper for rediscount can count upon receiving credit for the proceeds thereof as promptly as if it were a remittance of bank drafts. Promptness, liberality of treatment and willingness to meet all proper demands, which characterized the loan activities of the Reserve Banks, were most potent factors in bringing about a better understanding with their members.

QUICK MEETING OF CURRENCY NEEDS

At the same time the ability of the Federal Reserve Banks, through their power of note issue, to supply the rapidly expanding currency needs of the country, led to free development of this function. The process by which Federal Reserve notes are issued and redeemed is perhaps worthy of a brief description here. A member bank desiring currency or coin, requests the Federal Reserve Bank to charge its account and if it finds itself with more currency than it desires to retain in vault, or has currency which is no longer fit for use, it forwards the surplus to the Federal Reserve Bank for credit. The Reserve Banks pay the cost of shipping currency or coin both ways, thus facilitating the prompt redemption of currency which is in excess of the immediate needs of the country and enabling member banks

to operate with a minimum of vault reserve. The payment of cost of shipment of currency to the member banks was developed by the Federal Reserve Banks in an effort to give member institutions outside of the Federal Reserve cities as nearly as possible similar service to that given banks in the Federal Reserve cities. A similar policy for shipments of currency received from member banks was adopted as an incident to par check collection, with the object of eliminating any element of cost to a member bank in remitting for checks sent it for collection by the Federal Reserve Bank.

Check Collection Plan Progressed Slowly

The Federal Reserve check collection, on the other hand, was long an obstacle to the development of close relations with member banks because of the opposition of many of the banks in smaller places to the change in practice which this System involved. The collection of checks through the Reserve Banks has, however, made tremendous growth, and each Federal Reserve Bank now sends daily letters containing checks for collection to practically all of the banks of its district, both member and non-member. Similar contact results from the collection of notes, drafts, bills of exchange, coupons, maturing bonds, etc., which is undertaken by the Federal Reserve Banks.

Other important facilities are transferring funds by wire between various sections of the country without charge to the member bank and the safekeeping of securities—the Federal Reserve Bank of New York alone now holding in this manner for its members $1,239,215,899 of bonds and other securities. In all the transactions between the Federal Reserve Banks and their members, the attitude of the Reserve Banks is like that of any other bank dealing with correspondents, and matters are handled along banking lines, a fact which has had much to do with the development of the close relations which now exist between Reserve Banks and their members

Better Banking Methods

An important influence has been exerted by the Federal Reserve Banks making for improvement of banking methods on the part of member banks. The practice of obtaining financial statements from borrowers has become much more general because there is the possibility that the member bank may later desire to rediscount the paper with the Federal Reserve Bank, and also because the requirement of borrowers' statements (for notes of $5,000 or over) by the Federal Reserve Banks has had the effect of standardizing this practice and leading to its adoption by banks which had formerly not considered it feasible. Membership in the Federal Reserve System has made for important changes in the character of bank investments, mainly in the direction of greater liquidity. Banks which had formerly carried bonds or call loans on stock exchange collateral as their so-called secondary reserve, have adopted the sound practice of diversifying their investments by adding to their portfolios commercial paper purchased in the open market and such highly liquid elements as bankers' acceptances and United States certificates of indebtedness. Thus they have placed themselves in much stronger position as to availability of funds to meet withdrawals by carrying adequate amounts of paper available for rediscount or sale, and, also, at least a moderate amount of paper of short maturity. This improvement in the distribution and liquidity of member banks' investment holdings has enabled them with safety

to invest their funds more closely than ever before with resulting increase in profit.

In the important matter of check collections, also, the practice of the Federal Reserve Banks of deferring credit on out-of-town checks a sufficient time to permit of their actual collection, has led to realization of the importance of promptness in the handling of out-of-town checks, and closer analysis than formerly of accounts involving the element of collection time. The direct activities of the Federal Reserve Banks in collecting checks for their members has reduced very materially, and perhaps cut in half, the time required to collect out-of-town checks, and encouragement has also been given to member banks to form county clearing houses so that banks in neighboring towns may exchange with each other and still further reduce the time required for collection of such checks.

BANKS NEED LESS CASH IN VAULT

More economical methods as to the holding of vault cash by member banks have been made possible by improved facilities for obtaining currency and coin, and by legislation enacted in 1917, relieving member banks from the former requirement for a fixed amount of cash in vault. In October, 1914, the 7,571 national banks of the country held cash in vault equal to 16.4 per cent of their deposits. On June 30, 1921, 9,745 member banks held vault cash equal to only 2.6 per cent of their deposits.

The influence of the Federal Reserve Banks making for improvement in the technical features of bank operation, though not readily measured, has been of fundamental importance and is among the most beneficial results of the System's operations, especially when considered with full realization of the importance in modern economic organization of a banking machinery adapted to the great tasks which devolve upon it.

For obvious reasons no publicity has been given to a highly important Reserve Bank activity, the assistance of member banks which for any reason find themselves in a dangerous position; and the confidential character of this relationship precludes other than a very general statement concerning it. In a considerable number of instances the Reserve Banks have not only extended assistance in the way of loans, but have also loaned members of the Reserve Bank staff to assist the institutions through their difficulties, with the result, in a number of instances, that institutions which would otherwise have been forced to succumb, have been rehabilitated and are now in successful operation.

Close relations with member banks have also been assisted in some districts by conferences of member bankers with Federal Reserve Bank officers, at which the operations and functions of the Federal Reserve Banks were clearly and fully explained, and also by visits to member banks at their home offices, made by Reserve Bank representatives. The officers of the Federal Reserve Banks realize an obligation to extend a service of high order to member banks, and to promote coöperation along banking lines rather than to take an attitude which might lead member banks to feel that they were dealing with a distant and impersonal organization operated as a government agency. In other words, the Federal Reserve Banks have undertaken to function as *banks* and to conduct their relations with member banks along much the same lines as those by which the larger banking institutions of the country have in the past so successfully conducted their relations with out-of-town correspondents. The highly satisfactory results of this policy are to be found in

the friendly attitude which is now manifest on the part of member banks toward the Federal Reserve Banks.

Inter-relations of Reserve Banks

The establishment of twelve regional Federal Reserve Banks rather than of a central bank, was in keeping with the great area of our country, which might be considered as making the establishment of one great central bank of doubtful advantage, and with the American predilection for the minimum of banking centralization. The twelve Federal Reserve Banks were to be, and are, operated each by its own board of directors, and each is to a very large degree an independent entity, having power to deal with the problems arising within its own district according to the judgment of its directors and officers. This has given opportunity for the development of a considerable degree of individuality in personnel and methods, and for the control of each Federal Reserve Bank by men familiar with the business of the district.

Counteracting to a considerable degree this tendency to individuality in the management and operations of the several Federal Reserve Banks, is the influence of common function and purpose, of interbank contact, and, also, the supervision of the Federal Reserve Board. The practically identical relationship of each Reserve Bank to its members and the similarity of functions, led early to efforts to coördinate action on all matters possible of common solution. Even before the organization of the Federal Reserve Board and the Federal Reserve Banks, the preliminary Organization Committee had prepared plans for accounting and methods which were to a considerable extent used by the Reserve Banks when organized, though modified in many ways as experience showed need for change.

A conference of governors and directors of all Federal Reserve Banks preceded the actual opening of the Banks. Problems of general policy before the Banks and the Federal Reserve Board, have been the subject of discussion at conferences held from time to time by governors and Federal Reserve agents. Numerous conferences have also been held by representatives of the Reserve Banks to deal with the more technical features of operation, such as accounting and auditing methods, check collections, employment methods and other similar problems. The spirit of coöperation and willingness to take counsel together, evidenced at these conferences, has been typical of the everyday relations between the Reserve Banks and has resulted in the development of a close-knit system in which the several units, though independent in management, work together to obtain for their members and the public the advantages to be derived from a unified banking system.

The results of coöperation among the Federal Reserve Banks are in some cases very tangible, as, notably, the country-wide check collection system, the establishment of facilities for transfers of funds over the private wires between Federal Reserve Banks, the establishment of a Gold Settlement Fund through which has been obviated the necessity of gold shipments between different parts of the country, and, perhaps most important of all, the facilities for interbank rediscounts by means of which seasonal loan demands may be met by the Reserve Banks whose positions are relatively strong and who loan to those on which the pressure is greatest. The advantage claimed for a central bank with ability to direct the flow of loanable funds to the point of maximum need, appears to have been attained through this arrangement, as interbank rediscounts have been freely

and voluntarily made in such amounts as were necessary to meet the heavy loan demands in many districts which would otherwise have found themselves with greatly impaired reserves.

The heaviest borrowers relatively have been the Federal Reserve Banks in the agricultural sections, the lenders being usually the banks in sections whose activities are predominantly industrial. The interbank loans at their high point were as shown in the table below:

INTER-BANK LOANS OF FEDERAL RESERVE BANKS

Borrowers				*Lenders*			
Bank	Amount	Reserve Before	Percentages After	Bank	Amount	Reserve Before	Percentages After
New York	$49,305,000	35.3	38.6	Boston	$85,896,000	72.0	51.1
Richmond	19,900,000	35.4	45.8	Phila.	42,722,000	63.8	52.3
Atlanta	37,758,000	23.2	40.5	Cleveland	137,874,000	80.5	52.3
Chicago	13,050,000	37.9	39.5	San Francisco	886,000	45.2	44.9
St. Louis	40,410,000	21.0	41.3				
Minn.	27,204,000	17.0	39.0				
Kansas City	45,807,000	17.4	42.5				
Dallas	33,944,000	13.2	40.9				
TOTAL	$267,378,000				$267,378,000		

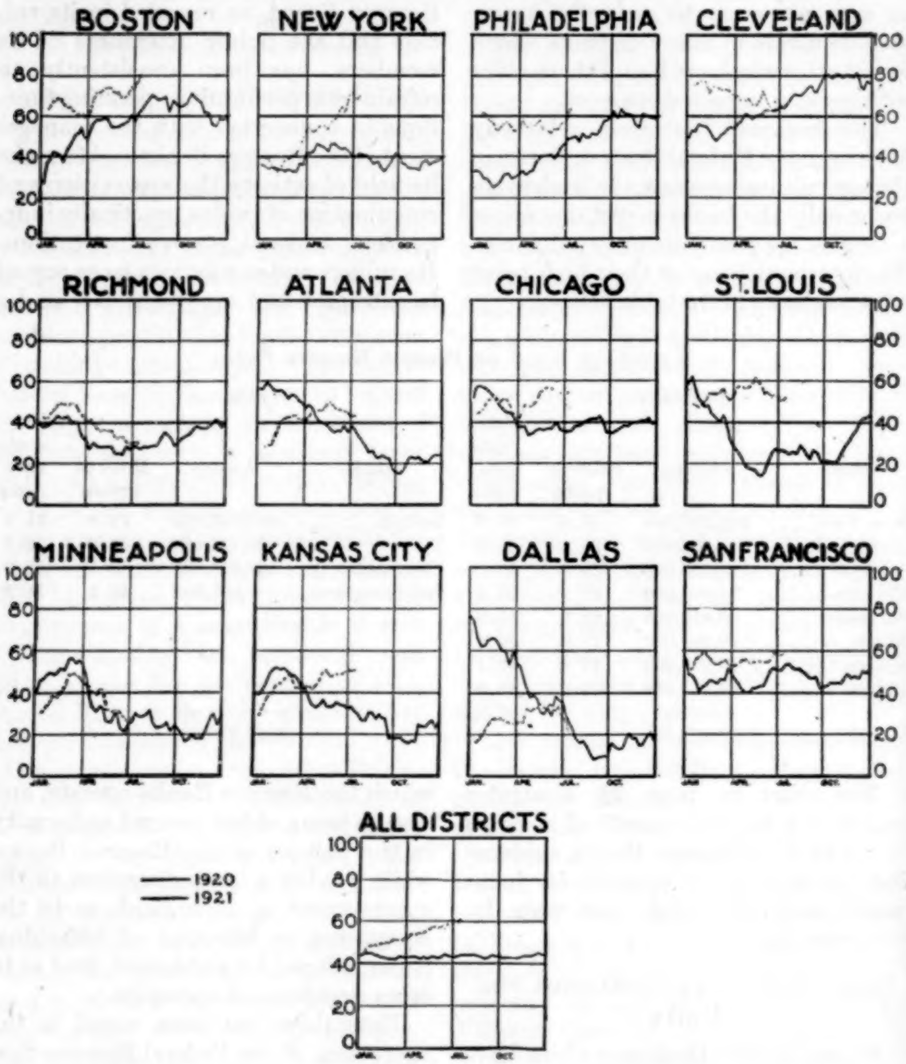
The chart on page 94 illustrates graphically the movements of reserves of the Federal Reserve Banks, evidencing the pressure of demand for loans which could be safely met only by rediscounting.

RESERVE BOARD'S INFLUENCE FOR UNITY

Strong as were the forces which have been mentioned in making for close relations and coöperation on the part of the Federal Reserve Banks, the position of the Federal Reserve Board, as the central element in the Federal Reserve organization, is one of such great influence that its policies may be regarded as in large measure responsible for the course which has been taken in the development of the System provided for in general outline by the action of Congress. The policy of the Reserve Board, as revealed in its rulings and the public utterances of its members, has been consistently to refrain from performing operating functions in connection with the management of the Reserve Banks and to make its field of activity the supervision and coördination of twelve practically independent regional reserve institutions. Its rulings and regulations have served to interpret and apply the law under which the Reserve Banks operate, and also to bring about general uniformity in the policies of the Reserve Banks, while leaving a large discretion to the management of each Bank as to the acceptance or rejection of individual paper, offered for rediscount, and as to other problems of operation.

Thus there has been noted in the operations of the Federal Reserve System a combination of uniformity of policy and flexibility of everyday operation which would be difficult or perhaps impossible under a system where the operating function was controlled by a central body. A tendency toward similarity of discount rates at the several Reserve Banks has been apparent, though differences in conditions have prevented and are likely to prevent complete uniformity in this

RESERVE PERCENTAGES FEDERAL RESERVE BANKS BEFORE INTERBANK ACCOMMODATIONS



particular. Practices as to check clearing and collection, collection of notes and drafts, supplying currency and coin, and loaning operations, are much alike at the different Reserve Banks, yet each Bank may, independently within the limits set by the law and the Federal Reserve Board's ruling and regulations, perfect and improve its methods of operation at its own option.

The Federal Reserve Board has made very clear that the Federal Reserve System is not a central bank or its equivalent, but that the twelve Federal Reserve Banks are independent institutions over which the Federal Reserve Board exercises supervisory authority, without attempting to participate directly in the management.

It thus appears that the advantages

to be expected from the free flow of credit from one part of the country to the other to meet demands for commercial, industrial or agricultural purposes, are supplied by the inter-bank rediscounting feature of the Federal Reserve System, but that the aim of having the problems of each district entrusted to directors living within the district and to officers closely familiar with these problems, with full discretion and power to act within their own districts, has also been attained. The Federal Reserve System may be said to give the advantages of the mobilization and centralization of banking reserves while preserving the typically American freedom from highly centralized control.

The Evolution and Practical Operation of the Gold Settlement Fund

By GEORGE J. SEAY
Governor of the Federal Reserve Bank of Richmond

IT is difficult to realize that only seven years have elapsed since the establishment of the Federal Reserve Banks. During that period, matters of such tremendous import to the world have happened and developments in banking and finance have been so revolutionary in their nature and size that we have a full understanding of the feelings of the small boy of seven who declared that, although only seven, judging by the experience he had had, he was 'most a hundred. Since 1914, the resources of the banks of the United States have grown from 27 billions of dollars to 53 billions, and bank clearings have grown from 155 billions to 451 billions. In measuring the national debt, the income of the Treasury and taxation, the unit is no longer a million but a billion.

All the momentous and tragic experiences of life leave an impression upon the mind of having occupied a prolonged period. Therefore, it seems that the Federal Reserve System has been operating for a period much longer than that measured by seven calendar years. As a matter of fact, it has, beyond doubt, developed in those seven years at a pace far more rapid than could have been expected in normal times. The country seems accustomed and seasoned to the operations of the Federal Reserve System, but, it becomes apparent from time to time that many people and even many banks have not a full appreciation of the accomplishments of the System or a full understanding of the fact that financial transactions of the magnitude developed within these seven years were rendered possible only by the operation of the System.

The country banker, when he sends his checks and collection items to his city correspondent, may think that thereby he is creating exchange. This is but the first and the lowest step in the creation of exchange. The processes involved in the collection and final settlement of such items are numerous and they constitute the fabric of exchange. The Federal Reserve System has developed the most comprehensive and most effective system of exchange known to the banking world.

The Federal Reserve Banks act as clearing houses for their members, and the various transactions engaged in by these banks create balances between

them and their members and between each other. The Federal Reserve Board has set up machinery which operates as a clearing house between Federal Reserve Banks, and the Gold Settlement Fund is the heart of the System.

Therefore, an account of the evolution and the practical operation of the Gold Settlement Fund, through which final payment is made for that vast volume of credit instruments circulating throughout the country, must contribute to a better understanding of the System as a whole.

Early Need of Inter-Bank Settlement Machinery

Under the terms of the Federal Reserve Act, the Federal Reserve Board, in Section 16, was authorized at its discretion to exercise the functions of a clearing house for Federal Reserve Banks. It is not to be supposed that there dwelt in the minds of the framers of this provision of the Act any well-defined conception of the manner in which this function would be exercised and least of all of the nature and magnitude of the settlements which this "clearing house" would be called upon to make within such a short period of time.

During the early days, after the organization of the Federal Reserve Banks in November, 1914, they were occupied chiefly by the receipt of payments of subscriptions to capital stock and with the receipt from member banks of deposits setting up the reserve required by the Act. Payments on account of subscriptions to capital stock were required to be made in gold or gold certificates. Reserve deposits were required to be made either in gold or lawful money, except that Federal Reserve Banks were authorized to receive as reserve not exceeding one-half of each installment payment in eligible paper, as described in Section 14. That is to say, member banks were permitted to rediscount at that time with their Federal Reserve Bank to this extent in establishing reserves.

Under date of November 25, 1914, a circular was issued by the Federal Reserve Bank of Richmond, advising its members that the bank was ready to commence rediscounting in the regular course of business and in a position to furnish Federal Reserve notes for the proceeds of rediscounts. The member banks had previously been advised that collections and clearings could not be undertaken at the beginning and that, therefore, active accounts of member banks could not be established until further notice. They were advised, however, that after initial payments of reserve had been made, checks drawn on any member bank in the cities of Richmond, Washington and Baltimore, all within the district, would be received for the credit of the members. The member banks were cautioned, however, that while the Richmond bank was accepting checks on banks in the reserve cities of the Fifth District "it is not intended at this stage that the Reserve Bank shall be used merely to transfer balances in one place in order to make them available in another," and further "members are expected to use their present clearing connections for making collections until greater preparation has been made for clearing."

Notwithstanding the restricted nature of the business conducted at that time, balances in excess of the required reserve were created, and checks against these balances found their way into other districts. No machinery had been set up to effect settlements between Federal Reserve Banks, but it was the understanding that any Federal Reserve Bank would have the

right to call upon any other for remittances in gold to effect settlement of balances between the two.

At that time of the year (December) the flow of funds was towards New York, and, as a result of the practice of receiving from member banks for credit checks on their balances in the reserve cities of this district and then permitting the banks to check on such balances—which checks were usually sent to New York in order to create exchange—the Federal Reserve Bank of Richmond became in debt to the Federal Reserve Bank of New York for several millions of dollars. To place restraint upon this practice it became necessary to advise member banks that such checks deposited with the Federal Reserve Bank for the purpose of creating exchange would be subject to a charge for collection, in accordance with Section 16 of the Act. On January 18, 1915, in sending out notification of the second installment due on capital stock subscriptions, members were advised that payments could be made by means of checks on national banks in New York City instead of in gold. This was done for the purpose of reducing the debt of the Richmond Bank to the New York Bank, thus, to that extent, avoiding settlement with the New York Bank in gold.

It will be apparent that very early in the operation of the System the necessity for providing the machinery for making settlement between Federal Reserve Banks was a pressing one, and during that time careful study was being given to the question, both by the Federal Reserve Board and the officers of the Federal Reserve Banks.

ESTABLISHMENT OF THE GOLD SETTLEMENT FUND

Prior to the organization of Federal Reserve Banks, a report was made to the Reserve Bank Organization Committee, by those whose services were engaged for the purpose, which contained many practical suggestions as to the organization and operation of Federal Reserve Banks. Among these was a suggestion for a "Federal Reserve Clearing House," which involved the deposit of a certain sum of gold by each Federal Reserve Bank with the Federal Reserve Board or with any Federal Reserve Bank designated by the Board to act as a clearing agent and settle balances between Federal Reserve Banks by means of book entries made by a settling agent or by certificates issued by the settling agent.

At the first conference of the governors of the banks, held with the Board in Washington, December 10, 11 and 12, 1914, a special committee was appointed to study the subject and report to the next conference. At the second conference held in Washington, January 20–23, 1915, the report of the committee was received, discussed by the conference, and, with several amendments, was submitted to the Federal Reserve Board. The plan submitted to the Board by this conference was substantially that outlined in the report of the preliminary committee on organization, though many details were submitted by the conference. The Board took the matter under consideration and announced in April, 1915, that the plan of settlement between Federal Reserve Banks had been completed and would become effective about the middle of May, 1915.

In the meantime, all the Federal Reserve Banks had been maintaining accounts with one another, which accounts, of course, were affected by all interdistrict transactions.

Under date of May 8, 1915, the Federal Reserve Board issued its *Bulletin* No. 13, Series of 1915, out-

lining the plan of clearing between Federal Reserve Banks. The plan was designed to effect settlements of all balances then outstanding and thereafter to settle accounts between Federal Reserve Banks weekly. The following is a brief statement of the principal feature of the plan: Each Federal Reserve Bank was required to forward to the Treasury at Washington or the nearest subtreasury for credit in the account of the Gold Settlement Fund one million dollars in gold, gold certificates or gold order certificates, in addition to an amount at least equal to its net indebtedness to all Federal Reserve Banks.

The Treasury Department undertook to advise the Federal Reserve Banks of the receipt of the funds and undertook further to deliver to the Federal Reserve Board gold certificates payable to the order of the Federal Reserve Board in denominations of ten thousand dollars, covering the sum so deposited. Each Federal Reserve Bank was required to make such payment into the Gold Fund from time to time as might be necessary to maintain the balance to its credit in the Fund at one million dollars. Federal Reserve Banks having balances in excess of one million dollars, as a result of clearing operations, were allowed to withdraw the excess at will, payment to be made by shipment of gold order certificates to the said bank by the Board, or payment through the nearest subtreasury.

The Board kept a set of books in which there was an account for each Federal Reserve Bank, showing at all times the amount of gold held for each bank. The gold order certificates representing the gold held by the Treasury were kept in a safe in the Treasury vaults set apart for the exclusive use of the Board, to be opened only in the presence of two persons designated by the Secretary and two designated by the Board. The balance of each Federal Reserve Bank in the Gold Fund was permitted to be counted as a part of the gold reserve of the bank. Each Federal Reserve Bank was required to keep two accounts with every other Federal Reserve Bank, one showing the total amount due to the other Federal Reserve Bank and the other, the amount due from the other Federal Reserve Bank.

The first settlement, being historic, will be described. It was made in the following manner. At the close of business, Wednesday, May 19, 1915, each Federal Reserve Bank advised the Federal Reserve Board by wire the amount in even thousands due by it to each other Federal Reserve Bank as of that day. On Thursday, May 20, the settling agent appointed by the Board telegraphed each Federal Reserve Bank the amount of credits to its settling account, giving the name of each bank from which such credits were received, also the net debit or credit balance in the settlement. After the receipt of these advices, but not later than May 24, each Federal Reserve Bank was required to put into the Gold Fund by shipment or transfers of gold or gold certificates of the United States, directly or through the nearest subtreasury, an amount sufficient to cover its debit balance, if any, and to establish a credit balance of at least one million dollars. The totals so remitted at that time were $18,450,000. The Federal Reserve Banks made appropriate entries in their accounts based upon the report of the settling agent. Thus the Gold Settlement Fund was launched. Thereafter, settlements were made weekly, on Thursday, upon the basis of figures telegraphed by each Federal Reserve Bank at the close of business Wednesday.

The Treasury Department had not only agreed to receive remittances in gold and to issue ten thousand dollar gold order certificates to the Federal Reserve Board, but had also agreed to allow the use of the subtreasuries in connection with remittances and withdrawals from the Gold Fund by Federal Reserve Banks. It was understood and agreed, however, that if the receipt of such remittances or the making of such payments at any time involved the actual shipment of gold from the Treasury at Washington to a subtreasury, or vice versa, the expense of such shipments should be borne by the Federal Reserve Banks.

COMMENCEMENT OF AN INTRA-DISTRICT CLEARING PLAN BY FEDERAL RESERVE BANKS

It will be understood that the balances of member banks with their Federal Reserve Banks were affected chiefly by two operations: first, by discount operations, and, second, by the collection of checks through the Federal Reserve Bank. Up to this time, as before described, the collection of checks by a Federal Reserve Bank for its members, even within its own district, had been very limited. In June, 1915, most, if not all, of the Federal Reserve Banks put into operation a voluntary plan of intra-district collections. According to this plan, a Federal Reserve Bank invited all of its members to join the collection plan, under which each member that joined the plan could send to the Federal Reserve Bank checks upon every other member that had joined the plan but upon no other members and upon no member outside of its own district. The Federal Reserve Bank would give the sending member bank immediate credit for such checks in its reserve account. On the other hand, each member bank joining the plan had agreed that upon the day of receipt the Federal Reserve Bank could charge its reserve account with the total amount of checks drawn upon it.

While the operations of this plan did not primarily involve relations between Federal Reserve Banks, such relations were indirectly involved. Clearings under the plan depleted the reserve accounts of some members and resulted in excess balances in the reserve accounts of others. The member bank whose reserve accounts had been depleted had to remit in gold or lawful money or in some form of exchange acceptable to the Reserve Bank. Other banks whose clearings resulted in excess balances had the right to check against such balances and checks on one Federal Reserve Bank were received for credit by other Federal Reserve Banks. These transactions, in so far as they affected the accounts between Federal Reserve Banks, tended to increase the volume of the weekly settlements through the Gold Settlement Fund. It is because of this fact that a description is given of the early developments of a collection plan by Federal Reserve Banks.

In addition to clearing weekly, Federal Reserve Banks had the privilege of transferring excess balances in the Gold Fund to other Federal Reserve Banks by wire or letter to the Federal Reserve Board. During the week ending June 24, 1915, the Federal Reserve Bank of San Francisco transferred in this way to the Federal Reserve Bank of Boston two hundred thousand dollars. During the week ending July 1, 1915, San Francisco made two transfers, four hundred and fifty thousand dollars to New York and thirty thousand dollars to Chicago. These initial transfers are mentioned because they are historic. After that time, transfers between Federal Reserve Banks became more and more frequent.

The first withdrawal from the Gold Settlement Fund by any Federal Reserve Bank was made on July 14, 1915, by the Federal Reserve Bank of Chicago. Its telegram requesting the payment was received by the Board at 10.30 a.m. and at 2.00 p.m. on the same day the Assistant Treasurer of the United States at Chicago advised the bank of his readiness to make payment. Although in a number of cases thereafter such withdrawals occurred from time to time, the convenience and usefulness of the Gold Settlement Fund became more and more apparent, and there developed a tendency to allow credit balances to accumulate, so that the Fund passed the one hundred million dollar mark on November 18, 1915.

Federal Reserve Agents' Gold Fund

In the latter part of 1915, the Board determined to enlarge the scope of the Gold Settlement Fund by opening accounts with the Federal Reserve agents of the various Federal Reserve Banks. While very little discounting was done by Federal Reserve Banks in the early days of the System, the volume of Federal Reserve notes put out was very considerable. Therefore, almost from the beginning, each Federal Reserve agent had the custody of and the responsibility for a considerable amount of gold, all of which, except 5 per cent deposited with the Treasurer of the United States as redemption fund, remained in his possession. Transactions involved in the issue and retirement of Federal Reserve notes necessitated frequent payments in large sums from the bank to the agent and from the agent to the bank. When these payments were made in gold or gold certificates, much counting and recounting was necessary on the part of the employes of the bank and the representatives of the Federal Reserve agents.

In the early part of September, 1915, the Federal Reserve Board resolved that a Gold Fund should be established for the use and benefit of Federal Reserve agents, not identical with, but in close relation to and coöperation with the Gold Settlement Fund of the twelve Federal Reserve Banks. The settling agent of the Board was directed to open and maintain on the books a distinct and separate account for each Federal Reserve agent and to receive from the said agent, or from the Federal Reserve Bank for the account of such agent, deposits of gold certificates, subject to the order of the Federal Reserve agent for whom such deposits had been made. The fund of the Federal Reserve agents was handled and operated in the same manner as the Gold Settlement Fund of the banks, but, as before mentioned, the funds were handled separately. As a consequence, when transfers were made from an agent to a bank or a bank to an agent, it was necessary for the representative of the Board to make an actual shift of gold or gold certificates from one safe to another or from one compartment in the safe to another compartment.

The Federal Reserve Bank of Atlanta was the first to make such a transfer. On September 8, 1915, $2,500,000 was passed from the account of the bank in the Gold Settlement Fund to the credit of the Federal Reserve agent. Simultaneously, the Federal Reserve agent of Atlanta released to the Federal Reserve Bank of Altanta the same amount in gold or gold certificates. The second bank to make use of this facility was the Federal Reserve Bank of Richmond, the amount of the transfer being $2,600,000 from the account of the bank to the account of the agent. At the

time of this writing, the Federal Reserve agents in five of the Federal Reserve Banks are keeping all of the gold deposited with them (except the 5 per cent redemption fund deposited with the Treasurer of the United States) in this fund. Of the remaining seven, six have much larger amounts to their credit in the fund than they are holding in the vaults of their banks. The amount to the credit of all Federal Reserve agents in the fund is $1,169,210,000, while the total amount of gold and gold certificates held by the several Federal Reserve agents at their respective banks is $450,162,000. The total amount in the funds of the Federal Reserve agents and Federal Reserve Banks is $1,665,321,000.

SCOPE OF CLEARING PLAN

The voluntary intra-district clearing plan, established by nearly all of the Federal Reserve Banks in June, 1915, did not prove successful because it embraced only a comparatively small percentage of member banks whose operations through the Federal Reserve Banks were confined to the exchange of checks upon one another. As a matter of fact, the plan was devised and operated partly as an experiment to develop experience and data necessary to the intelligent planning of a more comprehensive system. The Federal Reserve Board and the officers of all the Federal Reserve Banks had given a great deal of time and study to the situation, both in conferences with the Board and otherwise. On July 15, 1916, the present clearing plan between Federal Reserve Banks and their members and between the Federal Reserve Banks themselves was put in operation. The plan is now too well known to need description. The plan has been modified and improved to some extent since its inauguration. At the time the plan was inaugurated, the total number of member and non-member banks embraced in its operation was approximately fifteen thousand. At the present time the number is 28,191, or 92.8 per cent of all banks in the country, embracing more then 98 per cent of all banking resources. The number of items handled by the System in 1920 was 503,728,000, amounting to $179,459,351,000.

The operation of the new collection plan very greatly increased the number of transactions between Federal Reserve Banks. At the same time, the increasing issues of Federal Reserve notes made necessary an increasing number of transfers between each bank and its Federal Reserve agent and between the banks themselves and the Treasurer of the United States in transactions relating to the 5 per cent redemption fund for Federal Reserve notes.

In its Second Annual Report covering the operations of the Fund, the Federal Reserve Board, page 79, stated: "The Federal Reserve Board has, up to the close of the year 1915, settled through the Gold Settlement Fund for the twelve Federal Reserve Banks indebtedness aggregating $1,052,649,000 with a net change of only $95,697,000 in ownership of gold held in the Fund, or 8.14 per cent of the total amount cleared. The direct expense incident to the Gold Settlement Fund in handling these transactions has been approximately $1,150, principally for equipment and telegraph services."

In its Third Annual Report covering the year 1916, the Federal Reserve Board stated that the total clearings for the year had been $5,533,966,000. The cost of handling the Fund was $1,343.37, or $0.002¼ per $1,000. The net amount of change of ownership among Federal Reserve Banks as

a result of these clearings was only $223,870,000. The Board remarked, "It may be estimated conservatively that the shipment of coin and currency of at least that amount was thus avoided." This statement merits careful attention.

Amendment of June 21, 1917

The next step in the evolution of the Gold Fund was as follows: It will be remembered that the Gold Funds of the Federal Reserve Banks and the Federal Reserve agents were kept separately and that this arrangement made it necessary for the two representatives of the Federal Reserve Board and the representative of the Treasury Department to open the safe in which the Fund was held in ten thousand dollar gold order certificates and make actual transfers of such certificates from one fund to the other whenever transfers were rendered necessary. Continued increases in the issue of Federal Reserve notes and in the number and amounts of transactions between Federal Reserve Banks, involving large increases in both gold funds and a greatly enlarged number of transactions, made the duties of the custodians of the Gold Fund very burdensome. Therefore, the Board recommended to Congress an amendment to the Act, which became a law on June 21, 1917, for the purpose of simplifying the operation of the Fund, which had grown from $18,450,000 in May, 1915, to considerably more than $500,000,000.

Under the new plan, made possible by the amendment of Section 16 of the Federal Reserve Act, the Treasurer of the United States opened an account with the Federal Reserve Board, giving credit to the Board for the sum of deposits of Federal Reserve Banks and Federal Reserve agents combined. Individual accounts were kept as formerly by the Federal Reserve Board. The Fund was transferred to the keeping of the Treasurer of the United States, and the Board, in its bulletin for July, 1917, in describing the transfer, said: "Some idea of the magnitude of the Fund may be had from the fact that a truck load of gold order certificates (in ten thousand dollar denomination) was transferred from the Federal Reserve Board to the Treasurer of the United States. It took three men over two days to place a stamped endorsement on the certificates. Had the amount represented been in the form of gold coin, it would have weighed 963 short tons. The Treasury of the United States, of course, issued its receipt to the Board for the money."

In its Fourth Annual Report covering the year 1917, the Federal Reserve Board stated that the operation of the Fund, which was, in effect, a clearing house for the twelve Federal Reserve Banks, had been particularly useful during the year by reason of the continuous transfers of very large amounts, which had grown out of the sale of government bonds and Treasury certificates and redistribution and disbursement of the funds realized. The total volume of clearings and transfers through the Fund during the year amounted to $26,962,000,000, as compared with $5,575,000,000 during 1916. The net balances representing the change of ownership between the Federal Reserve Banks of gold held in the fund were $272,000,000. The Board stated: "Without such an arrangement, actual settlings between Federal Reserve Banks would have been accompanied with great expense and loss of time, but by its aid these enormous transfers have been made automatic and instantaneous and have been made without the inconvenience and expense which would have been

unavoidable had a physical transfer and shipment of money been necessary."

It is not only the expense and delay of the physical transfer and shipment of money which was avoided. It is to be doubted whether such transfers would have been possible at all under the old banking plan without creating financial disturbances which would have unsettled the business of the nation.

Up to this time Federal Reserve Banks were still making weekly settlements on a basis of figures shown by their books at the close of business Wednesday. Practically all communications between the Federal Reserve Banks and the Federal Reserve Board with reference to weekly settlements and transfers had been made by wire, and messages had necessarily been sent over the commercial wires. The necessity for private wires between all Federal Reserve Banks and branches and the Federal Reserve Board became too urgent to be postponed. A private or leased wire system was put in operation on June 4, 1918, and all Federal Reserve Banks employed telegraph operators.

Daily Settlements Through the Gold Fund

The next step in the evolution of the Gold Fund was the institution of daily instead of weekly settlements. On July 1, 1918, a daily settlement plan was put into effect. In the *Bulletin* for July, 1918, the Board said:

> The plan will eliminate a great deal of work at the Federal Reserve Banks, and through daily instead of weekly settlements will provide for the proper adjustment of the gold holdings to the credit of each Federal Reserve Bank in the Gold Settlement Fund in as nearly automatic a way as possible. At the present time, the Federal Reserve Banks, in addition to the weekly settlement, have the privilege of demanding transfers at any time upon the net debit balance as shown in accounts with other Federal Reserve Banks. It must be expected that if the present plan of weekly settlement were to be maintained, such transfers would become more numerous in the future as the calls upon the Federal Reserve Banks became heavier. The proposed plan (for daily settlement) would do away with the greater part of such transfers and will release for the strengthening of their reserves the funds now carried as the amounts due from other Federal Reserve Banks. Under the law, balances due from other Federal Reserve Banks could not be counted as a part of the reserve of any Federal Reserve Bank, but under the regulations of the Board, which then existed, such balances due from other Federal Reserve Banks were allowed as deductions from net deposits in making reserve calculations.

Growth in Clearing Transactions

Combined clearings and transfers through the Fund during the year 1918 aggregated $50,242,000,000. Thus, by gradual development, what seemed, and was indeed, a formidable undertaking was worked out. The internal accounting operations of the Federal Reserve Banks were readjusted and improved, but no change was made in the plan of settlement during the year 1919. Clearings and transfers through the Fund for the year 1919 aggregated practically 74 billion dollars. The Board, in its annual report for the year 1919, made the following statement:

> When it is considered that these enormous transfers are made almost instantaneously by means of the leased wire system without involving the physical movement of a dollar, it will be seen that the arrangement has been of incalculable value to the government, the banks and the public. The total expense of operation, including the cost of the leased wires and the salaries of accountants, was approxi-

mately $250,000. This represents the basic cost of effecting domestic exchanges between the several reserve districts. A charge of ten cents per one hundred dollars, if generally imposed, would have imposed an expense on the commerce of the country of $73,984,252.

The leased wire system had been extended to all branches of Federal Reserve Banks, and in many cases these branches participated in the Gold Settlement Fund.

The last refinement in the evolution of the Gold Settlement Fund was made when all transactions between Federal Reserve Banks which are settled through the Gold Fund were made effective on the day on which they occurred. This was made possible by the introduction of a plan or practice under which all transactions to be settled through the Gold Fund were wired to the Board from the banks and the branches, and the Board made the settlement upon its books as of that day at the earliest possible hour on the following morning, and wired the settlement figures to each Federal Reserve Bank. The Federal Reserve Banks kept their books open until such wires were received from the Federal Reserve Board, and then made the few entries necessary and closed their books as of the previous day. This plan has worked admirably and has eliminated all the float which had to be carried by those Reserve Banks with credit balances in the settlement under the previous plan, by which the daily settlement payments were not received until the day following that on which the settlement figures were made up. The volume of clearing through the Gold Fund for the year 1920 was $92,625,000,000. The average weekly volume of clearings increased from $31,898,000 in 1915 to $1,793,584,000 in 1920.

"Behold, how great a matter a little fire kindleth!" Thus, from cautious beginnings, feeling the way, but nevertheless with unexpected rapidity of progress, the Federal Reserve System has developed the most effective, the most comprehensive and the most economically administered exchange system in the world of banking. When all the banks of the country are on a par clearing basis, the system can be made still more effective and useful.

At the present time, a member bank may obtain from its own Federal Reserve Bank, free of expense to itself, a telegraphic transfer of funds, in any amount, to any point in the country where a member bank is located. These transactions are effected between Federal Reserve Banks and are settled through the Gold Fund.

The Gold Fund has been of inestimable value to the Treasury, and has rendered easy of accomplishment the most stupendous financial operations ever undertaken. During the past two years, the government has collected taxes from every nook and corner of the country, amounting to about one billion dollars quarterly. Certificates of indebtedness have been issued, have matured and been paid, and the receipts and disbursements of the Treasury for a single day, on occasions, have amounted to approximately a billion dollars each way. All of these funds passed through the Federal Reserve Banks; they were adjusted and redistributed through the Gold Fund without disturbance of the financial equilibrium and so smoothly as to occasion hardly a comment. It has become a routine matter.

Lord Byron makes the Prisoner of Chillon say:

> "So much a long communion tends
> To make us what we are."

So we say that the public from long communion with these huge transactions now takes them as a matter of course, but without fully understanding that it is the wonderful working of the Federal Reserve System which makes us commercially and financially what we are.

Eligibility for Discount

By CHARLES L. POWELL
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THE kind and character of paper which the Federal Reserve Banks may discount for member banks is in broad general terms defined in Section 13 of the Federal Reserve Act. It is there provided that the Federal Reserve Banks, upon the endorsement of member banks, may discount for them: (1) notes, drafts and bills of exchange issued or drawn for agricultural, industrial or commercial purposes, or the proceeds of which have been used or are to be used for such purposes; (2) acceptances of banks of the character and kind described in the Act.

The Federal Reserve Board, by the same section of the Act, is given the right to determine or define the character of paper made eligible for discount within the meaning of the Act; and, the Board in the exercise of this statutory right has, from time to time, promulgated a series of regulations for the guidance of the Federal Reserve Banks and member banks. These regulations, while not a part of the statute, having been made and promulgated by a lawfully constituted body, have the force and effect of law.[1] As is said by the Supreme Court of the United States, in *United States v. Clark*, "the Legislature cannot delegate its powers to make a law, but it can make a law to delegate a power to determine some fact or state of things, upon which the law makes, or intends to make, its own action depend." Accordingly, the regulations made by the Federal Reserve Board defining, applying and limiting the character of paper eligible for rediscount must be read as part of the Act.

GENERAL LIMITATIONS ON ELIGIBILITY

The limitations on eligibility for discount, as provided by the Act and the regulations of the Board, are directed to (1) the maturity of the paper and (2) its source of origin, or the purposes for which it is to be used. The language used by the Act in respect to the latter is modeled upon many prior proposals for legislation and was manifestly for the purpose of avoiding the use of bank funds in two general classes of transactions, that is to say, in speculative transactions and in transactions involving capital investments.

The reason for these two provisions of the Act—the one relating to the origin or purpose of the note or bill and the other to its short maturity—is found in the recognized necessity of keeping the assets of the bank liquid at all times and thus readily available to meet the demands of commerce and trade.

It was expected, and the operation of the Act has proved it to be the case, that a large part of the banking resources of the nation would find its way into the

[1] *United States* v. *Grimaud*, 220 U. S. 506; Dasterbignes Case, 122 Fed. 30; *United States* v. *Clark*, 143 U. S. 664.

Reserve Banks. It was, and is, unthinkable, from a scientific standpoint, that these resources should be tied up in long-time investments, or in investments permanent in their nature. It is the very essence of the Federal Reserve System that its funds must be invested in short-time securities, which, in theory at least, are self-liquidating.

BOARD DEFINITIONS OF ELIGIBLE PAPER

Regulations of the Federal Reserve Board have been promulgated and put into effect, clarifying, amplifying and explaining the language of the Act, keeping in view at all times the broad general provision of the Act that investments must be of short maturity and must have arisen out of commercial transactions. These regulations have been revised from time to time. The last revision was put out under date of October 6, 1920.[2] This revision was amended May 6, 1921.[3]

The Board's regulations define with particularity promissory notes, drafts, bills of exchange, trade acceptances, six months' agricultural paper and bankers' acceptances eligible for discount, but the definitions thus promulgated by the Board are well within the usual definitions found in the Negotiable Instruments Acts of the various states, so far as such acts deal with similar instrumentalities of commerce.

In addition to definitions of such ordinary instruments, a trade acceptance is defined as "a draft or bill of exchange, drawn by the seller on the purchaser of goods sold, and accepted by such purchaser."

Six months' agricultural paper is defined as "a note, draft, bill of exchange or trade acceptance, the proceeds of which have been used, or are to be used, for agricultural purposes, including the breeding, raising, fattening or marketing of live stock, and which has a maturity at the time of discount of not more than six months, exclusive of days of grace."

COMMERCIAL AND AGRICULTURAL PURPOSES DEFINED

Under the regulations, paper may be eligible because issued or drawn for an agricultural or commercial purpose, or it may be eligible because the proceeds have been, or are to be, used for an agricultural or commercial purpose. The purchase and sale of goods of any character is a commercial transaction from the standpoint of the seller, and the note of a buyer given to the seller in payment for articles purchased is a note which has been "issued or drawn for a commercial purpose."

The use of the proceeds of a note to purchase goods for re-sale is a commercial purpose, even though the articles purchased will be permanent investments in the hands of the final purchaser; and, accordingly, the note of a dealer, discounted by him at a local bank, to provide funds to purchase articles for re-sale, may be eligible for discount as commercial paper, irrespective of the character of the articles purchased; but a note of a farmer discounted by him at his local bank to provide funds with which to purchase articles for agricultural uses, is eligible or ineligible for discount according to the character of the articles. If the articles are in the nature of permanent or fixed investments, then it is not eligible; but if, on the other hand, they are articles for agricultural uses and have to be replaced from time to time, the farmer's note is eligible for discount as agricultural paper.

The distinction between agricultural paper and commercial paper is important in several respects: Agricultural paper having a maturity of

[2] *Federal Reserve Bulletin*, 6: 1179.
[3] *Ibid.*, 7: 545.

six months may be eligible, while commercial paper to be eligible can have a maturity of but three months; a farmer's note given in payment for articles or commodities to be used by the farmer for agricultural purposes is agricultural paper; but the purchase and sale of agricultural products is a commercial and not an agricultural transaction, and a note given to a farmer for agricultural products grown by him, is eligible, if at all, as commercial paper.[4]

LONG-TIME FUNDS AND GOVERNMENT BONDS

The Board's regulations, following the provisions of the Act, provide for the discount by Federal Reserve Banks of such notes, drafts, bills of exchange, trade acceptances, six months' agricultural paper and bankers' acceptances of short maturity and of commercial origin referred to therein, but such regulations, following and expressing the spirit of the Act, provide that a note, draft, or bill of exchange, the proceeds of which have been used for permanent or fixed investments, such as lands, buildings, machinery and other capital purposes, or which have been used, or are to be used, for investments of purely speculative character, or for the lending to some other borrower, shall not be eligible for discount.

Both the provisions of the Act and the regulations of the Board make eligible for discount obligations issued or drawn for the purpose of carrying or trading in bonds and notes of the government of the United States, when such obligations are of proper maturity. Further, the Federal Reserve Act was, in effect, amended by the War Finance Corporation Act, approved April 5th, 1918, whereby obligations of appropriate maturity, as defined by the Federal Reserve Act, when secured by bonds of the War Finance Corporation, are made eligible for discount. However, notes, drafts or bills issued or drawn for the purpose of carrying or trading in other stocks and bonds are not eligible for discount.

Strict negotiability of instruments of commerce is one of the prime requisites of paper eligible for discount by a Federal Reserve Bank. This is for the reason that a member bank must endorse paper tendered for discount, not only for the purpose of placing the title thereof in the Federal Reserve Bank, but also for the purpose of assuming all the responsibilities of an endorser upon negotiable paper. To the end that such liability of member banks, as endorser, be preserved, the instrument tendered for rediscount must be strictly negotiable within the meaning of the law applicable to commercial paper in the particular jurisdiction.

The Federal Reserve Board has promulgated rules for the determination of the eligibility of paper for discount, which rules have to do merely with the method to be pursued by the Federal Reserve Banks in ascertaining the ultimate facts as to whether or not the paper is eligible under the provisions of the Act and the regulations of the Board; but such regulations are evidenciary in effect and have to do, not with the eligibility of the paper, but merely with the method of procedure in ascertaining its eligibility.

COMMERCIAL AND AGRICULTURAL PAPER ELIGIBLE FOR DISCOUNT

Notes secured by mortgage, if otherwise eligible, may be discounted.[5] Inasmuch as notes payable "on or before" a given date are negotiable within the meaning of the Negotiable Instruments Act, in force in most of

[4] *Ibid.*, 6: 1302.

[5] *Ibid.*, 2: 679.

the states, and under the Law Merchant, such notes are eligible for discount.[6] The assignment of an open account is not negotiable, and is not eligible for rediscount.[7]

A bill of exchange drawn by the seller on the purchaser of advertising space and accepted by such purchaser is a trade acceptance and is eligible for discount.[8] The note of a farmer held by a member bank, given for the purpose of assisting the farmer to produce a crop or to fatten his cattle, is eligible for discount if of proper maturity, whether or not secured by mortgage.[9] A note drawn for commercial purposes, otherwise eligible for rediscount, is not ineligible because it is secured by a mortgage on real estate.[10] The notes of a water works company, the proceeds of which have been, or are to be used to provide funds for the pay roll, purchase of coal and the like, are eligible for discount.[11] The note of a packing company, the proceeds of which are used for the purchase of live stock for slaughter is not "based on live stock" within the meaning of Section 13 and is not eligible for discount if it has a maturity in excess of 90 days.[12] A certificate of participation in a note, which, itself, is eligible for discount, is not eligible.[13] Water sold by an irrigation company to farmers and delivered through the company's ditches may be classed as "goods sold," within the meaning of the Board's regulations and a note representing the agreed purchase price thereof is eligible for discount.[14] Natural gas actually sold and delivered is "goods sold" and a trade acceptance covering such is eligible for discount.[15]

The note of the owner of property which is to be developed or built up, the proceeds of which note have been, or are to be used by him to pay for the work of developing or building, is not eligible for discount, but the note of an owner given in good faith to the contractor in actual payment of material and services furnished by him for the owner, may be considered technically eligible for discount as paper, the proceeds of which have been or are to be used for commercial or industrial purposes.[16]

Collateral notes of Federal Farm Loan Banks, secured by farm loan bonds or the note of a Joint Stock Land Bank, secured by its own bonds, are not eligible for discount.[17] Federal Farm Loan Bank bonds are not eligible for discount, and are not, accordingly, eligible as collateral for member banks.[18] A note, secured by paper eligible for discount, is not itself eligible for discount unless its proceeds have been used, or are to be used, for industrial, agricultural or commercial purposes.[19] Under the present definitions of a trade acceptance, it seems that a draft drawn for an insurance premium would not be eligible for discount.[20] The note of a farmer given for a tractor to be used on his farm may be discounted as agricultural paper.[21] A note given by a farmer for the purchase price of a commodity can be classed as agricultural paper eligible for rediscount when having a maturity in excess of ninety days, if the maker is to use the commodity for agricultural purposes, regardless of whether the note is discounted by the maker or the endorser; but if not intended for such use, then the paper is eligible for discount as commercial paper, if having a maturity not in excess of ninety days.[22]

[6] *Federal Reserve Bulletin*, 2: 394.
[7] *Ibid.*, 2: 227.
[8] *Ibid.*, 3: 116.
[9] *Ibid.*, 3: 378.
[10] *Ibid.*, 3: 458.
[11] *Ibid.*, 3: 527.
[12] *Ibid.*, 3: 616.
[13] *Ibid.*, 3: 949.
[14] *Ibid.*, 6: 949.
[15] *Ibid.*, 4: 435.
[16] *Ibid.*, 6: 699.
[17] *Ibid.*, 6: 609.
[18] *Ibid.*, 4: 33.
[19] *Ibid.*, 4: 108.
[20] *Ibid.*, 4: 309.
[21] *Ibid.*, 4: 309.
[22] *Ibid.*, 4: 312.

A member bank having acquired eligible paper in due course from a non-member bank may discount such paper with a Federal Reserve Bank.[23] A note, the proceeds of which is used for tilling or draining farms, may be classed as agricultural paper and is eligible for discount.[24] A note of a non-member bank, secured by notes of the government of the United States, and given for the purpose of carrying or trading in such notes of the United States, is eligible for discount when presented by a member bank.[25] A member bank may obtain the discount of its paper secured by government bonds for a period as long as ninety days, by acting through another member bank, although a member bank, acting alone, may not tender its collateral note to the Federal Reserve Bank for a longer period than fifteen days.[26] Silos are permanent improvements, and notes given for their purchase are not eligible for discount.[27] Where a railroad company purchases supplies and accepts the draft of the seller and the seller discounts the draft with a member bank, such draft is eligible for discount.[28] The six months' maturity privilege as applied to agricultural paper does not apply to the sales a manufacturer of implements makes to a dealer for re-sale to a farmer.[29] The actual sale of goods, and not what is generally termed a conditional sale, must be the basis of a trade acceptance.[30]

A draft drawn to cover the purchase price of goods sold, plus the cost of installing those goods, is eligible for discount.[31] A note is not eligible for discount as commercial paper unless made and endorsed by a party to the commercial transaction, out of which it arises.[32] This is but another way of saying that the proceeds must be used in the first instance for a commercial purpose by the borrower. It is merely emphasizing the thought that paper to be eligible, must be issued or drawn under such circumstances that, in the normal course of business, there will automatically come into existence a fund available to liquidate each piece of paper, that fund being the final proceeds of the transaction out of which the paper arose.

A note of a grain dealer or other purchaser of grain, given to a grower for grain purchased for re-sale, is commercial paper and is to be discounted as such, even though the grower subsequently discounts the note and uses the proceeds for an agricultural purpose. The same principle applies to a draft drawn by the grower, and accepted by the purchaser, in whole or in part payment for grain purchased for re-sale.[33] Here is brought into play the rule that the transaction out of which an instrument arises in the first instance determines its classification, irrespective of any transaction in which the instrument may be subsequently negotiated.

A note given for the purchase of a motor truck by a farmer is clearly held to be eligible for discount, as agricultural paper, but notes or trade acceptances given in the purchase of motor trucks of a corporation engaged in the business of furnishing motor transportation are not eligible for discount, as such trucks represent in a large extent the corporation's capital investment.[34]

Paper, the proceeds of which are to be used to make loans to third parties, is finance paper rather than commercial or agricultural paper and is not eligible

[23] *Ibid.*, 4: 520.
[24] *Ibid.*, 4: 743.
[25] *Ibid.*, 4: 743.
[26] *Ibid.*, 4: 863.
[27] *Ibid.*, 4: 971.
[28] *Ibid.*, 4: 974.
[29] *Ibid.*, 4: 1118.
[30] *Ibid.*, 5: 964.
[31] *Ibid.*, 4: 310.
[32] *Ibid.*, 7: 1079.
[33] *Ibid.*, 7: 1199.
[34] *Ibid.*, 7: 191.

for discount.[35] Where a cold storage company uses the proceeds of its notes to make advances to customers who have placed their goods in the company's warehouse to be sold by the company for the account of the customers, and the customers give the storage company their notes for the amount of these advances, and as security for such notes, pledge the warehouse receipts, and the storage company pledges the customers' notes and the warehouse receipts as collateral for their own notes, such notes are not eligible for discount.[36] Growers' drafts accepted by coöperative marketing associations are eligible for discount with Federal Reserve Banks, as agricultural paper, and may have a maturity not in excess of six months.[37] The note of an irrigation company cannot be classed as agricultural paper, but a farmer's note, given to an irrigation company in payment for a supply of water, may be regarded as agricultural paper.[38]

Notes of corporations or associations engaged in packing and marketing fruits should not be classed as agricultural paper, but as commercial paper, and such notes are eligible when their maturities do not exceed ninety days. The business of such corporations or associations in the marketing of fruits is a commercial business rather than an agricultural business.[39]

THE FUNCTION OF BANKERS' ACCEPTANCES

As already noted, Federal Reserve Banks may discount, for their member banks, bankers' acceptances. A bankers' acceptance is defined by the regulations of the Federal Reserve Board as "a draft or bill of exchange, whether payable in the United States or abroad, and whether payable in dollars or some other money, of which the acceptor is a bank or trust company, or a firm, person, company or corporation engaged generally in the business of granting bankers' acceptance credits."

The practice of banks to make acceptances is practically as old as the business of banking, but the practice never came into modern use in the United States until after the enactment of the Federal Reserve Act. Prior to that Act the average American bank merely collected the idle funds of the community and loaned them and its own funds to its customers. The bank loaned capital and not credit. On the other hand, the chief merit and the distinguishing feature of European banking systems, especially in England, France and Germany, was found in the bank acceptances by which those banks loaned their credit. They standardized bills of exchange and added new power to them, so that by virtue of their credit quality these bills became, part of the circulating credit of the country. The European banks found the acceptance to be the cheapest form of credit instrument. It did not deplete cash holdings of the accepting bank and no reserve was needed to safeguard the risk. This acceptance power of European banks enabled them cheaply to finance export and import transactions and, doubtless, to a large extent explains why, prior to the Great War, all such financing was done by European banks to the utter exclusion of the American banks.

This salutary method of financing transactions was grafted on our system by the Federal Reserve Act and following that Act most of the states have conferred the acceptance power upon their state banks by specific provision, so that the granting of acceptances by banks has come to be a part of the general banking business in this country.

[35] *Federal Reserve Bulletin*, 6: 1176.
[36] *Ibid.*, 7: 308.
[37] *Ibid.*, 7: 1199.
[38] *Ibid.*, 7: 964.
[39] *Ibid.*, 7:1312.

THE DISCOUNT AND PURCHASE OF BANKERS' ACCEPTANCES

The Federal Reserve Act and the regulations of the Federal Reserve Board made pursuant thereto, and the Acts of the various states, have safeguarded the granting of acceptances by member banks. Indeed it may be said in broad general terms that bankers' acceptances, which have had their origin in accordance with the limitations of the Act and regulations, if not of more than three months' maturity, exclusive of days of grace, are eligible for discount by Federal Reserve Banks.

Federal Reserve Banks may discount any bill drawn by a bank or banker in a foreign country or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as provided in the Act and regulations of the Board, provided such draft has not more than three months' maturity, exclusive of days of grace.

Bankers' acceptances, to be eligible for discount, may involve: (1) the shipment of goods between the United States and any foreign country, or between the United States and any of its dependencies or insular possessions, or between foreign countries; (2) a shipment of goods within the United States; or (3) the storage of readily marketable staples.

When the acceptance is based on a shipment of goods between the United States and any foreign country, or between the United States and any of its dependencies or insular possessions or between foreign countries, shipping documents covering goods in process of shipment need not be attached to the draft drawn for financing the transaction. Neither is it essential that each draft cover specific goods actually in existence at the time of the acceptance, but, in order that said drafts be eligible for discount, it is necessary either, (1) that shipping documents or documentary export draft be attached at the time the draft is presented for acceptance, or (2) if the goods have not been shipped, that there be in existence a *bona fide* contract providing for the exportation or importation of such goods and that the customer agree that the accepting bank will be furnished in due course with shipping documents or with exchange arising out of the transaction. A contract between principal and agent will not be considered such *bona fide* contract.

In the case of shipment of goods within the United States, the regulations provide that shipping documents conveying security title should be attached to the draft at the time of its acceptance.

A bankers' acceptance based upon the storage of readily marketable staples must be secured at the time of acceptance by a warehouse, terminal or other similar receipt, conveying security title to such staples, and the acceptor must remain secured throughout the life of the acceptance.

The discretion of the Board with reference to bankers' acceptances and the investment therein of the Federal Reserve Bank funds is probably broader than its discretion with reference to notes, drafts, trade acceptances, and other bills of exchange.[40]

The rule of the Board with reference to furnishing shipping documents in export or import transactions is not met by the furnishing of freight receipts or non-negotiable copies of bills of lading.[41]

Shipping documents are legally in the possession of an accepting bank when they are held by its correspondent or by some other independent party, as its agent, both in domestic and foreign transactions.[42] The period

[40] *Ibid.*, 7: 70. [41] *Ibid.*, 7: 191.
[42] *Ibid.*, 7: 191.

for which drafts may be accepted in the first instance should be approximately the same as that required to complete the shipment and finance the transaction involved.[43] A draft drawn by an American exporter, covering cotton consigned to his European agent, may be eligible for discount, when shipping documents covering goods actually shipped are attached at the time the draft is presented for acceptance, although the goods covered by the documents have not been sold, but are merely shipped on consignment to the agent abroad.[44]

A Federal Reserve Bank may purchase a bankers' acceptance from the drawer or even from the accepting bank, but there is no obligation upon a Federal Reserve Bank to purchase paper offered it, even though the paper is technically eligible.[45] Where a farmer draws a draft on his local bank for three or four months, secured by bills of lading covering the shipment of cattle to the farmer for feeding, and the local bank accepts the draft and the farmer then discounts it with another bank, such draft is eligible for discount if it has a maturity not in excess of three months.[46]

Bankers' acceptances, growing out of export or import transactions, having a maturity of not more than six months may be purchased in the open market by Federal Reserve Banks.[47] The "shipping documents" to be furnished banks accepting drafts growing out of export or import transactions mean an order bill of lading, or a straight bill of lading, whichever is issued by the carrier in the particular case. They do not include freight receipts or mere copies of original bills of lading, but these documents may be held by a correspondent or agent.[48] A bankers' acceptance drawn by a coöperative marketing association, secured by warehouse receipt covering non-perishable agricultural commodities stored in warehouses independent of the association, is eligible for discount. The acceptance of drafts, secured by bills of lading, for the primary purpose of providing the borrower with working capital during the period required to manufacture and re-sell the goods covered by the bills of lading, is an abuse of a domestic acceptance privilege.[49] Drafts drawn by the purchaser of goods and secured at the time of acceptance by bills of lading covering the goods bought are not eligible unless the proceeds are to be used to pay for the goods.[50]

A bankers' acceptance secured by a warehouse receipt covering an automobile or automobile tires is not secured by "readily marketable staples" and is not eligible for discount, but an acceptance secured by a bill of lading covering an automobile or automobile tires in the process of shipment, providing the acceptance otherwise complies with the terms of the law or the regulations of the Board, is eligible for discount.[51] A bankers' acceptance is not eligible for discount if, at the time of its acceptance, the period required for a conclusion of the transaction out of which the original draft was drawn, shall have elapsed.[52] A draft drawn abroad, payable in the United States in dollars, and secured by a warehouse receipt covering readily marketable staples stored in a warehouse in a foreign country, is eligible for acceptance by a member bank and for discount by a Federal Reserve Bank, if of appropriate maturity.[53]

The Federal Reserve Board has defined a "readily marketable staple" as

[43] *Federal Reserve Bulletin*, 7: 308.
[44] *Ibid.*, 7: 419.
[45] *Ibid.*, 7: 699.
[46] *Ibid.*, 7: 815.
[47] *Ibid.*, 7: 545.
[48] *Ibid.*, 7: 191.
[49] *Ibid.*, 6: 1301.
[50] *Ibid.*, 3: 380; 6: 66.
[51] *Ibid.*, 6: 65.
[52] *Ibid.*, 5: 858.
[53] *Ibid.*, 5: 740.

an article of commerce, agriculture or industry, of such uses as to make it the subject of constant dealings in ready markets, with such frequent quotations of prices as to make the price easily and definitely ascertainable, and the staple itself easy to realize upon by sale at any time.[54]

Under the terms of Section 13 of the Act, any draft or bill of exchange, which a member bank has the power to accept under the provisions of that section, is technically eligible for rediscount by a Federal Reserve Bank.[55]

An accepting bank, secured in a domestic transaction by shipping documents or warehouse receipts, at the time of acceptance may release the shipping documents or warehouse receipts prior to payment, providing the draft or drafts accepted for one person do not exceed 10 per cent of the capital and surplus of the accepting bank.[56] Member banks may legally accept drafts drawn against them, secured by sugar placed in bond under transit entry and warehouse receipt issued by the collector in negotiable form.[57] National banks may not accept a draft which is secured by a chattel mortgage on cattle.[58] Where a dealer is engaged in purchasing the same character of goods for export and domestic use, a member bank accepting his draft drawn to finance an export transaction should require proper assurance that the proceeds of such draft will be used for the purchase of goods for export and that the acceptance will be paid out of the proceeds of sales of goods exported.[59]

A trust receipt in the hands of an accepting bank which permits the purchaser of the goods to procure control of the goods is not actual security, within the meaning of the Act.[60] One in the possession of a bill of lading covering a domestic shipment of goods may not procure an acceptance thereon by a member bank without regard to the use to which the proceeds of the draft are to be put. There must be more than a casual connection between the drawing of the draft and the transaction involved.[61] A warehouse receipt, to be appropriate security for an acceptance, should be issued by a warehouse which is independent of the borrower.[62] Gold bars may be properly considered as "goods" and, accordingly, sixty day bills, when accepted by banks against such a shipment, would be eligible for discount. Exchange drawn to finance a shipment of gold coin from the Uuited States to Europe or Canada, is eligible for purchase when otherwise in conformity with the Act and regulations.[63]

A bankers' acceptance secured by a bill of sale of stock on hand is not eligible for discount.[64] A bankers' acceptance secured by chattel mortgage on cattle is eligible for discount[65] but the Board has ruled that a national bank may not accept a draft so secured.[66]

PAPER MUST BE KEPT LIQUID

The conservation of the strength of the Federal Reserve System is dependent upon the strict adherence of the Federal Reserve Banks to the rules governing the eligibility of paper for discount. If those rules are adhered to, the portfolios of the Reserve Banks will be filled with liquid securities maturing from day to day, thus bringing into the banks a continuous flow of money to meet the demands of commerce and trade. On the other hand, if those rules are departed from, the portfolios of the banks will become clogged with "frozen credits," and the purpose for which the Reserve Banks were organized will be defeated.

[54] *Ibid.*, 5: 652.
[55] *Ibid.*, 5: 255.
[56] *Ibid.*, 4: 634.
[57] *Ibid.*, 4: 520.
[58] *Ibid.*, 4: 437.
[59] *Ibid.*, 4: 314.
[60] *Ibid.*, 3: 881.
[61] *Ibid.*, 3: 380.
[62] *Ibid.*, 3: 30.
[63] *Ibid.*, 3: 29.
[64] *Ibid.*, 2: 684.
[65] *Ibid.*, 2: 65.
[66] *Ibid.*, 4: 309.

Amendments to the Federal Reserve Act

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THE Federal Reserve Act has been amended a number of times since it became a law on December 23, 1913, but none of the amendments can be said to have affected any fundamental change in the structure or operation of the Federal Reserve System. Experience has indicated how the purposes of the framers of the Act could be advanced by further legislation, and how the Federal Reserve System could best serve the banks and the business of the country; Congress in the light of this experience has modified many of the provisions of the original Act. But the principles upon which the Act was based, the functions of the Federal Reserve Banks and their relation to the member banks and to business and commerce, remain essentially unchanged. It will not be attempted in this chapter to discuss every amendment, for many of them are not considered of sufficient general interest to warrant mention in a work of this character; in many cases they relate solely to the internal administration of the Federal Reserve Banks.[1]

ACCEPTANCE POWERS OF NATIONAL BANKS

The first important amendment was the Act of September 7, 1916. Probably the most far reaching change effected by this amendment was with respect to the acceptance powers of national banks. The Act, as originally passed, authorized member banks to accept only drafts and bills of exchange "growing out of transactions involving the importation or exportation of goods." National banks were without authority to accept drafts in domestic transactions until, by the Act of September 7, 1916, they were given authority to accept drafts or bills in transactions involving the domestic shipment of goods or the storage of readily marketable staples, subject to certain prescribed conditions.

These conditions were that the bank issuing acceptances in such domestic transactions must be secured at the time of acceptance by shipping documents covering the goods in process of shipment, or by warehouse receipts or other similar documents covering the readily marketable staples in storage. There never has been any similar requirement of law with respect to acceptances in foreign transactions and it is important to note this distinction, for it is the basis for a more liberal practice in connection with the issue of foreign acceptances than has been adopted with respect to domestic acceptances.

Because of the requirement that documents representing the goods or staples must be in the possession of the accepting bank at the time of acceptance, it is obviously impossible that domestic acceptances be issued except when the goods or staples are identified and in process of shipment or in storage. The issuance of acceptances to finance foreign transactions has, however, been authorized prior to the commencement of the actual export or import shipment, in cases where the customer for whom the acceptances are issued is under a definite contract to export or import goods in the future. This has been authorized upon the

[1] For a complete list of amendments prior to January 1, 1921, see the Annual Report of the Federal Reserve Board for the year 1920, pages 316–326.

theory that the export or import transaction commences with the execution of the contract and that the subsequent acts in fulfilment of that contract are inherent parts of that transaction, and may, therefore, be financed by means of acceptances.

The Act of September 7, 1916, further broadened the authority of national banks to issue bankers' acceptances by permitting them, under regulations of the Federal Reserve Board, to accept ninety day drafts or bills drawn by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in those places. Under the authority of this amendment the Federal Reserve Board has granted permission to member banks applying therefor to accept ninety day dollar exchange drafts drawn by banks or bankers in South American countries and in dependencies and insular possessions of the United States.

Other Provisions of the Amendment of September 7, 1916

Another important feature of the Act of September 7, 1916, was that it authorized Federal Reserve Banks to make advances for fifteen days to member banks on the promissory notes of the member banks when such notes are secured by paper which is eligible for rediscount or purchase or by bonds or notes of the United States. The provisions of the original Act did not permit Federal Reserve Banks to make advances or loans but permitted them only to rediscount eligible paper previously discounted by member banks.

The Act of September 7, 1916, amended Section 25 of the Federal Reserve Act so as to authorize national banks with a capital and surplus of not less than $1,000,000 to invest in the stock of foreign corporations. This amendment will be referred to in connection with the amendments of September 17, 1919, and December 24, 1919, which deal with the same general subject matter.

Amendment of June 21, 1917

The second important amendment to the Act was that of June 21, 1917. Up to this time few state banks had joined the Federal Reserve System, largely because, by becoming members under the provisions of Section 9 of the original Act, they were made subject to the provisions of the National Bank Act, which prohibit national banks from making loans to any one person in excess of 10 per cent of the bank's capital and surplus, and were required to make reports of condition to the Comptroller of the Currency; also because Section 21 of the original Act required the Comptroller to examine state member banks at least twice a year. The argument was also made that under the terms of the original Act a state bank once having joined the Federal Reserve System had no right to withdraw. In order to make membership in the System more attractive to state banks and trust companies, Section 9 was rewritten. This section as it now reads exempts state bank and trust company members from supervision or examination by the Comptroller of the Currency and provides that "subject to the provisions of this Act and to the regulations of the board made pursuant thereto, any bank becoming a member of the Federal Reserve System shall retain its full charter and statutory rights as a State bank or trust company, and may continue to exercise all corporate powers granted it by the state in which it was created." It also contains a provision specifically authorizing

withdrawal from membership upon six months' notice.

The Act of June 21, 1917, also amended the first paragraph of Section 13 of the Act so as to authorize non-member banks, irrespective of whether their capital is sufficient to make them eligible for full membership, to clear through the Federal Reserve Banks of their districts checks deposited with them, provided that they maintain balances with such Federal Reserve Banks sufficient to offset the items in transit held for their accounts. While this privilege has not been availed of by non-member banks to any material extent, apparently because non-member banks are able to obtain the full benefits of the Federal Reserve check clearing facilities by sending checks deposited with them to correspondent member banks which in turn clear such checks through their Federal Reserve Banks, and while from a strictly legal standpoint the Act of June 21, 1917, in the form in which it was finally enacted, did not have any important bearing upon the check clearing and collection functions of Federal Reserve Banks, nevertheless a brief discussion of the subject of check clearing and collection seems appropriate at this point because it was discussed at length in both the Senate and the House of Representatives when Congress had the preliminary drafts of the bill under consideration, and because the provision added by this Act at the end of the first paragraph of Section 13 is frequently referred to in discussions relative to this general subject.

Legal Aspect of the Federal Reserve Clearing System

In July, 1916, a country wide Federal Reserve check clearing and collection system was instituted, each member bank being required to remit at par for all checks drawn upon it cleared through the Federal Reserve Banks. This was an inter-district as well as an intra-district system, the exclusively intra-district clearing systems, which had previously been established but membership in which had been optional with each member bank, having proved unsatisfactory. Simultaneously with the establishment of the country wide clearing system, the Federal Reserve Bank of Boston took over the country collection department of the Boston Clearing House and was able to collect checks on all banks in New England at par, that is, at the full face amount without the deduction of any exchange charge by the drawee banks. In the other districts it was not possible to collect at par checks drawn on all non-member banks because many of them desired to continue their past practice of charging exchange when remitting for their checks. From the first, however, it was contemplated that the Federal Reserve check clearing and collection system should be extended gradually until it furnished facilities for collecting at par checks on all banks in the country, thus eliminating the enormous tax with which business and commerce has been burdened by reason of the practice of making exchange charges.

In their origin there was some justification for exchange charges because such a charge then represented an actual expense which the remitting bank incurred in having currency transported from where the bank was located to the place of business of the holder of the check who had received it in payment of a debt. At the present time, however, there is no necessity for the actual transportation of currency between Federal Reserve districts, since the Federal Reserve System, through its leased wires connecting all Federal Reserve Banks and

branches and through its Gold Settlement Fund at Washington, offers facilities for the instantaneous transfer of available funds by mere book entry. The Federal Reserve System pays the entire cost of maintaining these leased wires and the Gold Settlement Fund, and the Federal Reserve Banks pay the cost of transporting currency from member and non-member banks in their districts if such member or non-member banks desire to make remittances for their checks in this manner. Consequently, the justification for exchange charges has ceased to exist and to the extent that such charges are still made they constitute a tax paid by business and commerce for which no compensating service is received.

Following the policy of extending the Federal Reserve check clearing and collection system the Federal Reserve Banks undertook to induce non-member banks to remit to them at par, and when able to make satisfactory arrangements, they also undertook to collect checks drawn on non-member banks which did not remit at par by having such checks presented at the counters of the drawee banks.

This practice caused some opposition on the part of the non-member banks which still desired to charge exchange and as a result of this opposition a provision was inserted in the bill pending in Congress in the spring of 1917 to the effect that nothing in the Federal Reserve Act should be construed as prohibiting a member or non-member bank from making reasonable exchange charges. The Senate passed the bill with this provision in it, but the sentiment in favor of par collection finally prevailed and in the bill as agreed to in conference between the committees of the Senate and the House, and in the Act as finally approved, this particular provision was in effect nullified by the addition at the end of the paragraph in question, the first paragraph of Section 13, of the following clause: "but no such charges shall be made against the Federal Reserve Banks."

The policy of extending the Federal Reserve check clearing and collection system has been continued until now Federal Reserve Banks are able to collect checks drawn on about 28,000 out of a total of approximately 30,000 banks in the United States. The claim is made by some non-member banks which still persist in their desire to charge exchange when remitting for checks, that the final clause of Section 13 of the Federal Reserve Act should be construed as prohibiting Federal Reserve Banks from undertaking to make counter presentation of checks drawn on non-member banks which have not agreed to remit at par to the Federal Reserve Banks and this issue is involved in suits which have been instituted by such non-member banks against several of the Federal Reserve Banks.

AMENDMENT OF RESERVE REQUIREMENTS

Another important amendment accomplished by the Act of June 21, 1917, was the amendment to Section 19 of the Act changing the character and amount of the required reserves of member banks.

Section 19 of the Federal Reserve Act as amended by the Act approved August 15, 1914, before the Federal Reserve System was put into actual operation in November, 1914, provided that member banks in central reserve cities should maintain reserves equal to 18 per cent of their demand deposits and 5 per cent of their time deposits, and that member banks in reserve cities should maintain reserves equal to 15 per cent of their demand deposits

and 5 per cent of their time deposits, and that other member banks should maintain reserves equal to 12 per cent of their demand deposits and 5 per cent of their time deposits. Each class of member banks was required to keep only a part of its reserves in the form of balances with Federal Reserve Banks, another part being kept in the vaults of the member banks, and the member banks being given the option to carry the remainder either in their own vaults or as balances. This being the state of the law, a large proportion of the gold supply of the country remained in the vaults of member banks, where it constituted a part of the banks' lawful reserves.

The purchases in this country by the belligerent nations resulted in rapid accretions to this nation's gold supply and made it seem desirable to have a more effective means of controlling a possible over-extension of loans based upon these new accretions. On the other hand, the possibility of the rapid outflow of this gold at some time in the future made it necessary to provide for the most effective use of the gold supply, so that withdrawals might be arranged without forcing any violent contraction of loans and without causing any undue disturbance to legitimate business. For the accomplishment of these ends the mobilization and concentration of gold in the Federal Reserve Banks seemed the most effective means.

The first legislative move in this direction was the addition by the Act of September 7, 1916, of subsection 11(m) of the Federal Reserve Act providing that the Federal Reserve Board may permit member banks to carry in their Federal Reserve Banks any portion of their reserves theretofore required by Section 19 of the Federal Reserve Act to be carried in their vaults. When this country became directly involved in the War the question of the mobilization of the gold reserves of the country became still more important and was the primary cause of the enactment of the Act of June 21, 1917. By this Act member banks were required to maintain the entire amount of their reserves in the form of balances with Federal Reserve Banks, the total reserves required against demand deposits being reduced to 13, 10 and 7 per cent for member banks in central reserve cities, reserve cities, and country districts, respectively, and the total reserves required against time deposits being reduced to 3 per cent for all member banks.

Trust Powers of National Banks

After June, 1917, the Federal Reserve Act was not amended until September 26, 1918. This Act effected changes in a number of sections but the only one of general importance was the revision of Section 11 (k) relative to trust powers by national banks.

Under this section in its original form the Federal Reserve Board was authorized merely to grant to national banks "when not in contravention of state or local law, the right to act as trustee, executor, administrator, or registrar of stocks and bonds." National banks opening up trust departments, in accordance with authority granted to them pursuant to this section, were limited to the exercise of the four powers specifically enumerated, although competing state banks and trust companies might be permitted to exercise other fiduciary powers. Furthermore, the laws of some states specifically, or by necessary implication, prohibited the exercise of any fiduciary powers by national banks, so that it was "in contravention" of state law for national banks to exercise such powers, although competing state

banks might do so under the laws of the state. It became more and more apparent that national banks were laboring under a serious handicap in their competition with state institutions in the exercise of trust powers, and the amendment of September 26, 1918, was designed to put national banks upon equal terms with competing state institutions.

To this end the section was amended so as to include among the powers which the Federal Reserve Board could grant, the power to act as guardian of estates, assignee, receiver, committee of estates of lunatics, or in any other fiduciary capacity in which competing state banks are permitted to act. A provision was also inserted to the effect that whenever the laws of a state permit the exercise of fiduciary powers by competing state corporations, it shall not be deemed to be in contravention of state law for national banks to exercise such powers. Various other provisions were inserted to insure competition upon equal terms between national banks and competing state corporations, including that contained in the final paragraph of the section as amended to the effect that no permit shall be issued to any national bank having a capital and surplus less than the capital and surplus required by state law of state institutions exercising fiduciary powers.

The constitutionality of the original Section 11 (k) was upheld by the Supreme Court of the United States in the case of *First National Bank* v. *Union Trust Company*, 244 U. S. 416, in which it was held that Congress had power to grant to national banks authority to act in fiduciary capacities. The construction of Section 11 (k) as amended has been involved in a number of more recent suits. These suits have established that it is beyond the power of any state legislature to discriminate against national banks by prohibiting such banks from exercising fiduciary powers and that it makes no difference whether such discrimination is attempted by an affirmative prohibition against the exercise of fiduciary power by national banks or by withholding from the courts the powers to appoint national banks in fiduciary capacities.

DISCOUNT LIMITATION ON SINGLE BORROWER

The Act of March 3, 1919, amending the Federal Reserve Act, was of importance to member banks because it substituted for the then existing Section 11 (m), which had become obsolete, a new Section 11 (m), authorizing the Federal Reserve Board to permit Federal Reserve Banks to discount for member banks the paper of a single borrower up to 20 per cent of the member bank's capital and surplus, provided that the paper is secured by United States bonds or notes issued since April 24, 1917, or by United States certificates of indebtedness. Under the terms of Sections 9 and 13 the amount of paper of any one borrower which a Federal Reserve Bank may discount for any one member bank is limited generally to 10 per cent of the member bank's capital and surplus.

Section 11 (m) was intended as a temporary measure to assist in the absorption by the investing public of the securities issued by the government during the War, and according to its terms the section ceased to be effective after December 31, 1920. This process of absorption was not deemed to have been completed by that date, however, and section 11 (m) was re-enacted with a slight modification by an Act of Congress approved February 27, 1921, to be effective until October 31, 1921.

FOREIGN BANKING AMENDMENTS

Acts were approved September 17, 1919, December 24, 1919, and June

14, 1921, all relating to the same general subject matter, namely, the investment by national banks in stock of corporations engaged in foreign banking and other international financial operations, and the organization and operation of such corporations under Federal law and subject to Federal supervision. After the close of the War it became apparent that the adequate financing of foreign trade would require credit facilities of a kind which could not properly be furnished by banks doing a strictly commercial banking business, and that such special facilities could be furnished in a large way only by corporations with authority to purchase foreign securities and paper representing long term credits, and with authority to issue and sell to the public their own debentures secured by such securities and long-term paper.

The Act of September 7, 1916, had amended Section 25 of the Federal Reserve Act so as to authorize the larger national banks, that is banks with capital and surplus of not less than $1,000,000, to invest in the stock of "banks or corporations . . . principally engaged in international or foreign banking." There seemed to be some doubt, however, whether this authority to invest in stock of banks or corporations engaged in banking gave the right to invest in stock of these debenture-issuing or investment corporations. Furthermore, it seemed desirable for the encouragement of such corporations to authorize investments in their stock by all national banks, both large and small. Consequently, the Act of September 17, 1919, was passed authorizing national banks until January 1, 1921, and without regard to the amount of their capital and surplus, to invest in the stock of corporations "principally engaged in such phases of international or foreign financial operations as may be necessary to facilitate the export of goods, wares or merchandise from the United States or any of its dependencies or insular possessions to any foreign country."

Section 25, as thus amended, in terms authorizes national banks, upon the conditions and subject to the limitations therein stated, to invest in the stock of banks or corporations, of the specified kinds, which are "chartered or incorporated under the laws of the United States or any State thereof"; but, as a matter of fact, no provision was made for the incorporation under Federal law of such banks and corporations until the enactment of the so-called Edge Act, approved December 24, 1919.

This Act added to the Federal Reserve Act a section, designated Section 25 (a), which authorizes the organization of corporations "for the purpose of engaging in international or foreign banking or other international or foreign financial operations," thus permitting the Federal incorporation of both types of corporations referred to in Section 25, that is, banks doing a commercial banking business, and corporations issuing debentures and doing an investment business. The Act also describes the powers of such banks and corporations and gives to the Federal Reserve Board full power to examine, supervise and regulate their operations.

Section 25 (a) as originally enacted required that corporations organized under it should have a capital of not less than $2,000,000, one-quarter of which must be paid in before the corporation is authorized to commence business, and the balance in ten per cent installments at the rate of one every two months. This requirement was modified by the Act approved June 14, 1921, which provides, in effect, that a corporation with an

authorized capital in excess of $2,000,000 may apply for the consent of the Federal Reserve Board that such excess be paid in on call of the board of directors, provided, that in all events 25 per cent of the total authorized capital must be paid in before the corporation commences business.

THE SLIDING SCALE AMENDMENT

Finally, the Act of April 13, 1920, should be mentioned. Subsection (d) of Section 14 of the Federal Reserve Act authorized every Federal Reserve Bank to establish, subject to review and determination by the Federal Reserve Board, rates of discount for each class of paper. The Act of April 13, 1920, added to this section language specifically providing that such rates "may be graduated or progressed on the basis of the amount of the advances and discount accommodations extended by the Federal Reserve Bank to the borrowing bank." The purpose of this amendment was, of course, to give to the Federal Reserve Banks and the Federal Reserve Board clear authority to require member banks habitually borrowing in excess of their legitimate requirements to pay higher discount rates for their excess borrowings.

Preparation for War and the Liberty Loans

By J. HERBERT CASE
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AT the entrance of the United States into the World War in 1917 the readjustment of our credit and financial system to meet the unusual demands of the Public Treasury devolved in a large measure upon the Federal Reserve Banks. The financial activities of the government were soon to be extended upon a scale never before equalled by any country and the financial resources of the country were to be assembled and directed toward one purpose, winning the War. To accomplish this purpose would require highly developed sales organizations which would extend to every county and village in the country, and elaborate machinery for distributing the securities and collecting and disbursing the funds according to the Treasury's needs. More fundamental, however, was the necessity that our banking system should be able to meet the enlarged demands for credit incident to war financing, without unduly curtailing the credit needs of commerce and industry.

PREPARATION FOR WAR BY RESERVE BANKS

The announcement of the entrance of the United States into the War, however, did not find the Federal Reserve Banks wholly unprepared to meet the new responsibilities. Precautions had been taken early in the year to maintain the Federal Reserve Banks in a strong condition with regard for the disturbed conditions of the world and the changing economic conditions in this country. This country, heretofore a debtor country, had become a creditor nation; gold was flowing in, and foreign securities were being marketed here in increased amounts so as better to permit belligerent countries to pay for heavy purchases of goods, purchases so heavy, in

fact, that there had already developed a feverish business activity. A change in affairs was foreseen and heavy credit demands anticipated in the eventuality of either our participation in the War or the conclusion of peace, and the opportunity was taken to fortify and strengthen the position of the Federal Reserve Banks.

Unnecessary expansion of credits was checked and a reduction was effected in the holding of such bonds and warrants as had previously been acquired primarily for the sake of income. The beginning of April, 1917, found the Federal Reserve Banks in a very strong position; the holdings of municipal warrants had been reduced to small proportions, the total earning assets of the Federal Reserve Banks had gradually been reduced from $221,896,000 to $167,994,000 since the beginning of the year and the reserve ratio of the twelve Federal Reserve Banks was about 85 per cent. Moreover, the report of the Comptroller of the Currency and of state banking authorities showed the banks of the country to be in a strong condition.

Impounding Gold

In order that they might be prepared for any emergency, the Federal Reserve Banks, realizing their responsibilities as the guardians of the country's reserves, had adopted the policy of gradually building up their gold holdings in order that they might be used as a basis of credit expansion. There was a demand from the banks and the public for the new clean notes being issued by the Federal Reserve Banks, and the opportunity was taken to exchange these notes for gold and gold certificates. In issuing Federal Reserve notes, however, it was necessary to deposit as collateral with the Federal Reserve agent eligible commercial paper equal to 100 per cent of the notes issued; but in the early days of the System the available volume of eligible paper was limited. Therefore, in order to make the exchange, it was necessary to adopt a circuitous method which may be described as follows: The Federal Reserve Bank of New York, for example, would pledge $100,000 of commercial paper, obtaining in exchange Federal Reserve notes, and would then, as the Act authorized it to do, deposit gold to retire its liability for the notes and withdraw the paper. This operation would be repeated over and over again until enough Federal Reserve notes had been obtained to meet the demands for new currency. Moreover, the gold held as security for notes could not be used except as a 100 per cent fund to provide for their redemption and was held by the Federal Reserve agent specifically for that purpose.

For the purpose of further strengthening the System, the Federal Reserve Board in January, 1917, recommended a number of amendments to the Federal Reserve Act, and they were again transmitted to Congress during April and were adopted on June 21, 1917, substantially as recommended by the Board. One object sought by these amendments was to enable the Federal Reserve Banks more effectively to control the country's gold supply, and therefore the process of issuing notes was simplified by permitting their issuance either against gold or eligible paper, or both, as collateral. The Act as amended not only permitted gold to be pledged directly for notes, but allowed this gold to serve as the reserve required against the notes. The effectiveness of the gold reserves held by the Federal Reserve Banks was greatly increased and the adaptability of the System to the changing requirements of the public enhanced. After the passage of this amendment and our

entrance into the War, as a part of the redoubled efforts to impound the country's gold where it would serve its most useful purposes, both member and non-member banks were repeatedly urged to transfer their gold as it accumulated to the Federal Reserve Banks, and the appeal met with a hearty response.

The provisions concerning member banks reserves were likewise changed, first by reducing their required reserves to 13, 10 and 7 per cent for central reserve city, reserve city and country banks, respectively, and second, by requiring that their entire reserves should be carried as cash balances with the Federal Reserve Banks. These changes both augmented the gold holdings and increased their efficiency with a commensurate increase in the discount power of the Federal Reserve Banks. Member banks could no longer count as a part of their legal reserves, cash in their own vaults, and the privilege of country banks to keep a part of their reserves with reserve city banks was discontinued several months prior to the date originally fixed for such discontinuance. These changes increased the cash holdings of the Federal Reserve Banks by about $250,000,000. At the same time non-member banks were encouraged to deposit their cash reserves with the Federal Reserve Banks and to carry accounts with them for the clearing and collecting of their checks.

The success of the movement to accumulate gold is shown in Table I which gives for three years the country's monetary stock of gold, the gold holdings of the Federal Reserve Banks and the gold in general circulation, *i.e.*, outside the Treasury and the holdings of the Federal Reserve Banks:

TABLE I

TOTAL MONETARY STOCK OF GOLD, GOLD HOLDINGS OF FEDERAL RESERVE BANKS, GOLD IN CIRCULATION, 1917, 1918, 1919

Date	Total monetary stock of gold in the country	Gold held in U. S. Treasury	Gold holdings of Federal Reserve Banks	Gold in Circulation
January 1, 1917	$2,864,842,000	$233,945,000	$737,787,000	$1,893,110,000
January 1, 1918	3,040,439,000	212,231,000	1,558,116,000	1,270,092,000
January 1, 1919	3,080,510,000	327,239,000	1,916,656,000	836,615,000

MOVEMENT FOR A GREATER MEMBERSHIP

As originally provided in the Act, all national banks are necessarily members of the Federal Reserve System but prior to the entrance of the United States into the War, the membership of the Federal Reserve Banks included less than fifty state banks and trust companies, and the combined resources of member banks were approximately one-half of the total banking resources of the country. Obviously this was a weak point in the System. In meeting a great credit strain or unusual financial problems, it was believed that the Federal Reserve Banks would be called upon to support indirectly the non-member banks through credits granted to member banks, which, in turn, would aid the state institutions.

In view of the country's needs and the part played by the Federal Reserve Banks in carrying on the War, it was soon generally recognized that a moral

and patriotic obligation rested upon state bankers to support the system. Immediately following the declaration of war there was a decided movement among the stronger state institutions toward obtaining membership, a movement accompanied by some pressure on the part of the larger member banks which were desirous of being relieved from the duty of financing these non-member institutions in case of emergency. The Federal Reserve Board had adopted a liberal policy in its regulations both as to terms of admission of state banks and as to their rights to withdraw at their discretion, but there existed among these institutions a feeling of uncertainty and a lack of assurance that these rulings would be permanent without legislative sanction. The action of Congress, therefore, in passing the amendment approved June 21, 1917, giving to state institutions the assurance that they might become members of the System and carry on their activities substantially as before and, in addition, giving them the definite right to withdraw from the System on six months' notice, accelerated the movement to obtain membership.

The climax to this movement for a greater membership was a letter from the President on October 13, 1917, to state banks and trust companies, in which he urged a complete mobilization of the banking reserves of the United States in order to meet the great financial requirements imposed upon the country by the War. In this appeal the President said in part: "I believe that coöperation on the part of banks is a patriotic duty at this time, and that membership in the Federal Reserve System is a distinct and significant evidence of patriotism." Under these various incentives and influences many of the stronger state institutions filed applications and were admitted to membership. The progress of the movement towards greater unification of the banking system is shown by the fact that at the end of 1917 the membership of state banks and trust companies had increased to 250 and the Board in its Annual Report for that year estimated that the member banks represented approximately 75 per cent of the commercial banking assets of the country.

THE LIBERTY LOANS

While the President and Congress were wrestling with the problem of reorganizing our banking system, it had become generally recognized that the method of handling the government's finances through the Independent Treasury System was antiquated and the framers of the Federal Reserve Act happily inserted a clause authorizing the Secretary of the Treasury to require the Federal Reserve Banks to act as fiscal agents. At the beginning of 1916 the Reserve Banks began to act as fiscal agents of the government, but prior to our entrance into the War, their services had been limited to receiving deposits of receipts from customs and internal revenue and paying checks and warrants drawn by and on the Treasurer of the United States. But when the Treasury was confronted with the problem of raising and disbursing the huge sums necessary to carry on the War, the Reserve Banks became the chief agencies through which it operated; they became the administrative centers of the various Liberty Loan committees in addition to performing the minor fiscal agency functions. Floating the Liberty Loans was the paramount financial undertaking of the War; it was a task, the accomplishment of which necessitated arousing public opinion to a realization of the needs of the government and enlisting the support of every American.

SELLING LIBERTY BONDS

Perhaps I can best explain the methods used in selling government bonds by a brief description of the organization and work of the Liberty Loan committees in the Second District, with which I am most familiar. During the First and Second Liberty Loans, the responsibility for selling bonds in the second district rested largely upon volunteers from the various bond houses, banks and corporations which generously and patriotically contributed the services of their staffs. It was soon seen, however, that one loan was hardly completed before preparations for another one were being made, and it was realized that with each successive loan, as the novelty wore off, a more intensive campaign and more unified organization would be requisite in order to induce the public to do the necessary amount of saving and investing. Consequently a fixed establishment of paid employes was built up.

The central Liberty Loan Committee was the center and directing force around which the whole organization revolved. As finally perfected, it consisted of fifteen members, many of whom were heads of some of the largest banks and banking houses in New York. The chairman of the Committee was the Governor of the Federal Reserve Bank of New York. The Committee met frequently during the progress of the loans and determined the policies to be followed and the nature of the appeals to be made to the public.

One of the members of the Liberty Loan Committee was chairman of the distribution organization which had direct charge of sales and which was made up of bankers or partners in bond houses. The permanent staff of the distribution committee was headed by the director of distribution, who was the executive in charge of the immense and very active bond-selling organization.

This district, with the exception of three boroughs of New York City, was divided into eight subdistricts and a member of the distribution organization was chairman of each subdistrict. These subdistrict chairmen formed the connection between their local Liberty Loan committees and the central organization. They acted as advisers to the local chairmen and transmitted to them the plans and material prepared at headquarters. The number of committees and subcommittees ran into the thousands. In every community an extensive volunteer organization was formed which carried the campaign direct to the individual in every branch of human activity.

To the army of Liberty Loan workers, men and women through whose energy and patriotism the millions of subscriptions were actually obtained, is due a large part of the credit for the complete success of the greatest financial operation of all time.

A publicity organization was established as a necessary part of the selling campaign. Its mission was to carry to every citizen in the district the message of the Liberty Loans and of America. This message was carried in a great variety of ways in the effort to disseminate the ideals for which America entered the War and to point out the financial needs of the government for winning the War. In the newspapers and magazines, on the billboards, houses, lamp-posts, vehicles, flagstaffs, and in the store and householder's window, the appeal appeared, showing the obligation of every American to participate in the work of winning the War. Frequent Liberty Loan meetings were held and many hundred men and women delivered the message in public addresses.

PARTIAL PAYMENTS

One of the most difficult problems from the standpoint of the physical handling of subscriptions in New York City grew out of the enormous number of applications for $50 and $100 bonds from persons who of necessity could purchase only on the partial payment plan.

The fact that there were but a relatively small number of banks located in the metropolitan area to handle the growing volume of these transactions threatened serious congestion in the banks. This situation, however, was successfully met by the formation of the Liberty Loan Association of Banks and Trust Companies of New York, which handled, through a coupon book system, approximately 2,400,000 separate partial payment accounts in connection with the Third, Fourth and Victory Liberty Loans. Under this plan, subscribers were allowed to make payments at any of about 1,400 payment stations designated throughout the metropolitan district as a convenience to subscribers and as a measure of relief to the banks.

The Liberty Loan Association, under the direction of the Federal Reserve Bank of New York, with a staff of approximately 450 clerks operated the system through which over 90,000,000 individual payments were received and over 2,000,000 separate bonds were delivered. As many as 17,500 people called at the office of the Liberty Loan Association at 19 West 44th Street, New York City, during a single day.

The importance of this undertaking is not to be measured merely by the number of bonds distributed. Countless individuals could not have purchased these securities on any other than the instalment plan, and much credit is due the banking institutions and the hundreds of other coöperating agencies that made possible this great undertaking.

HANDLING THE LOANS

Up to the time of the First Liberty Loan, the Federal Reserve Banks had been operating with a comparatively small force of clerks, sufficient only to take care of the comparatively moderate volume of business which the banks had yet been called upon to do. It was not until after the First Liberty Loan campaign was actually under way that the officials in charge of the Federal Reserve Banks began to realize that their forces were totally inadequate to the magnitude of the task for the government which lay before them. The leading banks and investment houses were then appealed to for help and responded most effectively, willingly lending clerks, stenographers and even heads of departments and officers. In the Second District the force so loaned consisted of about 350 men who stayed with the Federal Reserve Bank until they were gradually replaced by a permanent staff just prior to the Second Liberty Loan.

It became necessary to develop special accounting systems, and control records in order properly and successfully to handle the issue, exchange and redemption of billions of dollars in government securities. Three separate departments were created to perform this work. One was organized to handle all operations in connection with the issue of bonds; another, to manage the sale and issue of certificates of indebtedness; and a third, to handle the collateral pledged by banks to secure government deposits. Something of the magnitude of the task performed by the government bond departments of the twelve Federal Reserve Banks may be seen from Table II which gives for the five Liberty Loans the record of subscriptions, allotments, exchanges and conversions.

TABLE II

SUBSCRIPTIONS, ALLOTMENTS, EXCHANGES AND CONVERSIONS FOR THE FIVE LIBERTY LOANS

Loan	Number of subscribers	Amount subscribed	Amount allotted	Number of pieces issued on allotments	Number of temporary bonds exchanged for permanent bonds. (Aug. 31, 1921)	Number of conversions (Aug. 31, 1921)
First	4,000,000	3,035,226,850	1,989,455,550	7,513,627	1,322,834	3,717,955
Second	9,400,000	4,617,532,300	3,807,865,000	14,938,073	5,610,948	12,317,448
Third	18,308,325	4,176,516,850	4,175,650,050	24,406,982	14,459,383	....
Fourth	22,777,680	6,993,073,250	6,964,581,250	33,024,445	17,405,606	....
Victory	11,803,895	5,249,908,300	4,497,818,750	17,498,172	....	636,960
Total	66,289,900	24,072,257,550	21,435,370,550	97,381,299	38,798,771	16,672,363

Other services of magnitude performed by the bond departments of the Federal Reserve Banks were exchanges of bonds of one denomination for bonds of another denomination, payment of coupons from all issues of Liberty Bonds and assistance rendered the Treasury Department in the registering of government bonds by receiving coupon bonds for registration and registered bonds for exchange into coupon bonds.

The current needs of the Treasury between the periods of bond issues and tax receipts were met by frequent issues of certificates of indebtedness of short maturities, which were also handled by the Federal Reserve Bank. These short credits proved to be a popular investment for our banking institutions and were periodically converted into long-time credits through the Liberty Loan bond drive and thus were distributed among individual investors. The issuance of certificates not only supplied a means of securing current funds but afforded a protection to the money market by distributing the receipts from loans and taxes over periods of time, thus avoiding periodic heavy withdrawals of funds from the market. On October 31, 1921 there had been eighty-eight issues of certificates of indebtedness, both loan and tax, aggregating $32,881,000,000 of which $30,235,000,000 had matured and had been redeemed.

PAYMENT BY BOOK CREDIT

In order further to minimize possible disturbances in the money market the Federal Reserve Banks at the request of the Secretary of the Treasury extended to banks the privilege of paying for their subscriptions to Liberty Bonds and certificates of indebtedness by book credit, which simply means creating a deposit in favor of the government to the amount of the subscriptions. These deposits were withdrawn gradually from the banks on a pro rata basis as needed by the government. The Federal Reserve banks as fiscal agents were required not only to keep records of these deposits and withdrawals, but also to receive and hold collateral against them; at times these deposits amounted to about a billion dollars and the Federal Reserve Banks were required to handle many billions of dollars of collateral in connection therewith.

Subcommittee on Money

The desirability of having an orderly money market was generally recognized and on September 5, just prior to the offering of the Second Liberty Loan, a subcommittee of the Liberty Loan Committee of the Second District was appointed for the purpose of securing the most complete coöperation with the government in its financial program by all the financial interests of the city. This committee was composed of the Chairman of the Liberty Loan Committee, as chairman, and the presidents of eight of the largest financial institutions.

The policy of this subcommittee on money was to prevent the absorption of an excess amount of credit by the security market which might interfere with the orderly marketing of the government's loans, and at the same time to assure that sufficient funds would be available to maintain a reasonably healthy security market in order to facilitate the successful placing of Treasury issues. It was considered of great importance that reasonable and necessary control be exercised over the employment of credit in order to insure no interference with the financial operations of the government in conducting the war.

This committee enjoyed the fullest coöperation of the governors and members of the New York Stock Exchange who unselfishly placed in the hands of the subcommittee confidential information which would enable the committee to take such steps as were calculated to maintain an orderly money market.

Meeting the Demand for Credit

The success of the Liberty Loans depended in large measure on the individual banks throughout the country. But the extent of their coöperation in turn depended upon the financial support which they felt they could secure from the Federal Reserve Banks. It soon became evident that the savings of the people in spite of the various thrift campaigns would not prove sufficient to meet the tremendous demands of the government and that a substantial portion of its borrowings would have to be met through bank credit. The banks supplied this credit both by subscribing to the loans themselves and by extending credit freely to their customers who borrowed in order to buy government obligations.

In fact, in order to insure the success of the government's financial measures, banks, life insurance companies, general business corporations and individuals were urged to subscribe heavily to the Liberty Loans without regard to their immediate ability to pay for them. Preferential discount rates were established by the Federal Reserve Banks in favor of paper secured by United States Government obligations and easy terms of payment promised by the individual bank to induce a sufficient flow of funds from the banks and the people to the government. With the coöperation of and by the support they gave to the individual banks of the country, the Federal Reserve Banks expanded the credit structure sufficiently to meet the needs of the great emergency.

The "borrow and buy" method of securing funds leads to inflation, to be sure, with all its consequent ills, but any method of financing a war, except solely out of the savings of the people, would have the same result. War financing always involves credit expansion unless private savings increase commensurate with government requirements. Try as we may, we cannot get away from this fact. We may safely say that the difference between the government's requirements for funds, as expressed in the securities

sold, and the volume paid for out of savings, represents a good part of the recent credit expansion. But it could hardly be expected that private savings would keep pace with the phenomenal demands of the government during the World War. Certainly no opportunity was neglected to impress upon the public the fact that they should save to the limit. While the Federal Reserve Banks were conducting a campaign urging increased borrowing as one means of selling Liberty Bonds, an equally intensive campaign urging upon the people the necessity for thrift and rigid economy was being conducted by the same banks under the direction of the Liberty Loan and War Savings committees, as well as by various other government agencies. The Food Administration, for instance, was active in this regard.

Furthermore, a campaign was carried on under the direction of the Capital Issues Committee for the purpose of conserving capital, labor, materials and transportation facilities for their most effective use in the prosecution of the War. There was a local capital issues committee in each district which reported to the central committee on all applications for permission to issue securities for the purpose of financing public or private corporate expenditure. The Capital Issues Committee of the Second District, although in existence less than a year, considered formal applications for issues amounting to $2,069,000,000, besides numberless cases where no formal applications were filed notwithstanding the fact that when the Committee was first appointed, the submitting of applications covering private issues was largely voluntary.

The record of the Federal Reserve Banks during the War, in my judgment, is one of splendid achievements. They not only organized and directed the sales campaigns and handled the details of every loan, but also by the support given to the individual banks of the country made possible their hearty coöperation and guaranteed the success of every loan. It is a cause for deep gratification that the banks and the people through efficient methods and organization were able to supply the government with such unprecedented sums to meet its needs in carrying on the War. That five great loans, aggregating more than $21,000,000,000, were rapidly and successfully distributed with hardly a ripple in the financial markets, is of itself a great testimonial to the new banking system which has now been thoroughly tried and has successfully met the test.

The Assumption of Treasury Functions by the Federal Reserve Banks

By Murray S. Wildman
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The Independent Treasury as it functioned for three quarters of a century was an institution unique in the field of public finance. It grew out of the general demoralization of the banks which followed the panic of 1837 and the downfall of the Second Bank of the United States. When the Act of 1841 was passed, followed by the more adequate Act of 1846, the need for such legislation was real and urgent. On the theory that the establishment and

regulation of banks was a duty of the states, the care of Federal funds called for a Federal agency. When in 1863 that theory was abandoned, the justification for the subtreasuries passed away with it; but in twenty years these institutions had become rooted in our political system.

An Outgrown and Objectionable System

As long as a government agency is merely useless it may be left alone. The subtreasury buildings are substantial and impressive features of our cities; they housed several hundred officials and clerks, some of whom were devoted aids of the administration which they served, and it was not enough to show that the maintenance of this establishment involved a waste of money. Before the Independent Treasury could be abolished it must be shown as responsible for positive harm.

The important ground of objection to the subtreasuries was their evil influence in the money market. The harm that they did was real and substantial, although it was obscure. The great hoard of coin and bullion and legal tender notes, which was kept behind massive steel bars and approached through dismal passages between granite walls, while it impressed the tourist, would have brought dismay to the borrower of funds if he had been fully alive to his interest. It was not merely the impounding of cash that called for condemnation of the system but the recurrence of large payments as well. The alternate collection and disbursement of the revenues brought alternate contraction and expansion of the bank reserves and consequent changes in discount rates, which, in turn, disturbed the markets for staple products and securities.

The establishment of the national banking system during the Civil War should have been followed promptly by the abandonment of the Independent Treasury, but at that particular period the banking business was not popular. The needed reform must wait for another time of great financial stress, and for a reorganization of the banking system on the principle of a single national cash reserve under Federal control.

The New Policy

The legislative acts which make definite provision for the new policy are two. Section 15 of the Federal Reserve Act of December 23, 1913, provided that "the moneys held in the general fund of the Treasury . . . may be deposited in Federal Reserve Banks, which banks . . . shall act as fiscal agents of the United States . . . and disbursements may be made by checks drawn against such deposits."

The other measure is found in the General Appropriation Act of May 29, 1920, which repealed the Act of 1846 in so far as it provided for subtreasuries, and required the Secretary of the Treasury to transfer the duties of the Assistant Treasurers of the United States to the Treasurer, the mints and assay offices and to the Federal Reserve Banks.

This Act of 1920 was belated. As intimated above, the officers and the employes of the subtreasuries owed their appointments to political influences. The original intention of the framers of the Federal Reserve Act was to have the subtreasuries taken over by the Reserve Banks. But, as the bill developed out of the economic and into the political stage in Congress, discussion arose and political force was asserted. "The moneys held in the general fund of the Treasury shall be deposited" in Section 13 became "may

be deposited" and the Secretary of the Treasury held the power of decision.

After the Reserve Banks were opened and had been officially designated as fiscal agents of the government, the Treasury made comparatively little use of them. Other bank depositaries were retained and treasury funds were placed for "crop-moving purposes" as in the past.

There was naturally adverse criticism. From official sources came pleas and explanations that the subtreasuries were convenient to the public, if not indispensable to the government, and the cities where they were located had their fears aroused that they were to be deprived of something of value to them. The criticism persisted, however. In the end the matter was referred, in March, 1917, to the Bureau of Efficiency for investigation and report to Congress.

The investigation was thorough and the report, made January 26, 1918, was most competent. The report concluded as follows:

> The Bureau of Efficiency recommends the ultimate abolition of the whole subtreasury system. It believes not only that the government will save money by this change, but also that the public will in the end be better served. It will be appreciated that in making this recommendation the Bureau of Efficiency seeks only to serve the public interest. If, however, the subtreasuries are to be continued, the Bureau of Efficiency suggests the following as a minimum program:
>
> The elimination of the three subtreasuries—Baltimore, Philadelphia and Cincinnati—which are of no essential value to the system;
>
> The abolition of the post of assistant treasurer everywhere and the transfer of responsibility to the cashiers;
>
> A reduction in the amount of coin-exchange business undertaken at the subtreasuries and by the cash room of the Treasury in Washington through the charging of a fee for receiving or paying out current coin;
>
> The concentration of all the redemptions of paper currency in Washington;
>
> Scarcely less than this can be done for the good of the Treasury and the people.

The effect of the legislation of 1920 was to make mandatory what had hitherto been permissive only. But the change of policy which these acts reveal had been slowly evolved out of a long and unhappy experience in the management of both public and private funds. The realization of the proper relation between Treasury and banks has been growing through a period of many years of nominal independence. It was made clearer by every financial crisis through which the country passed that real independence was impossible. Points of contact between Treasury and banks were established for greater convenience and economy in the handling of funds, and a relation of mutual dependence was tacitly recognized.

Relation of Treasurer to Banks 1865–1913

In order to save labor to both officials and the public, the subtreasury at New York was made a member of the clearing house on the resumption of specie payments, January 1, 1879. In the latter months of the Civil War and for several years thereafter the extensive collection of internal revenue as well as the necessities of postmasters led to the designation of certain national banks as United States depositaries. When a few years later depleted bank reserves coincided with surplus revenues in the Treasury, aggravating the stringency of the money market, the government adopted the policy of designating other national banks as special depositaries of public funds. Large sums were paid into these banks for the single purpose of putting idle cash to commercial use.

From the point of view of economical use of funds, bank depositors may be

divided into two groups: those who use banks for the safe-keeping of money, and those who use banks as agencies for the collection and payment of bills. The first class is typified by the savings depositor; the second, by the commercial depositor. The customary operations of the savings bank involve the receipt and payment of cash while the customary operations of the commercial bank involve the receipt and payment of credit instruments. In the latter case, cash is required only for a reserve, and this reserve is only occasionally brought into use. The result is that payments in and out of the commercial bank may vastly exceed the amount of cash employed. The public advantage in the use of this bank lies in the fact that a given amount of cash, when used as a reserve against deposits or notes, will accomplish much more than when used in payment directly.

In its use of national or state banks as public depositaries the Treasury never assumed the rôle of a commercial depositor in the sense here described. Funds were placed in the custody of the banks and in due course were ordered to be remitted to the Treasury. Ordinary disbursements were made by warrants drawn on the Treasurer and not by checks drawn on the banks. These so-called deposits were in reality loans to the banks in so far as the special depositaries were concerned. The banks held the funds for a definite period, paid interest on them and gave security for them. The term "deposit" was a misnomer and the practice of placing funds with the special depositaries could not be carried out without calling forth the charge of favoritism. The attitude of the public toward the banks selected to act as regular depositaries was somewhat different. These were chosen to serve the convenience of the government, but even here special collateral security was exacted and the relation of bank and depositor was not a normal one. There were no true active checking accounts maintained by the Treasury.

SITUATION 1913–1916

When the Federal Reserve Act was passed in 1913 there were 850 regular depositaries and 685 special depositaries, together holding \$76,000,000, and all of the subtreasuries except the one at Philadelphia were members of the clearing houses of the cities in which they were located. To that extent the independence of the Treasury had been abandoned. From the establishment of the Federal Reserve Banks there was a rapid evolution of a new policy on the part of the Treasury. The twelve Reserve Banks were designated public depositaries some time after they were ready for business. In the twelve cities in which these banks were established all other government deposits were discontinued, except that in some cases Federal court funds and postmasters' funds remained where they had been previously kept.

But the use of the Federal Reserve Bank as a depositary involved an important change in the attitude of the Treasury in that these banks gave no collateral security for the funds held. Moreover, the funds were used by the Treasury as checking accounts; indeed, in some cases the Treasury received temporary advances of funds against an approaching issue of loan certificates, and so, for the first time since 1846, the Treasury became a bank depositor and borrower in the common acceptation of these terms. But this change of attitude in 1914 was cautious and incomplete. The major part of the public revenue and expenditure continued as before to pass through the subtreasuries. At the close of the fiscal year, June 30, 1916, the distribution of the general fund was as follows:

In Treasury offices......	$130,534,179.97
In Federal Reserve Banks	113,480,576.00
In national bank depositaries...............	62,833,774.43
In Philippine Treasury..	3,968,122.73

The foregoing statement takes no account of the great trust funds held and administered by the treasury.

EFFECT OF THE WAR

The event which established the necessity of the new policy was our own entry into the World War and the great financial operations which ensued. Soon after war was declared it came to be the general understanding that our chief contribution to the joint enterprise would be in the field of finance and supply. To this end measures were adopted for the handling of funds of unprecedented magnitude with the least possible friction. Immediately on the passage of legislation providing for the first Liberty Loan, steps were taken to correlate the banks of the country with the Treasury for most effective team work. By the middle of November, 1917, the number of national banks designated as public depositaries was raised from 518 to 1,903. State banks and trust companies were pressed into service and 1,343 of these were named as public depositaries. In the Treasury circular of May 29 it was provided not only that banks so designated should hold on deposit to the credit of the government the funds received by them in the sale of bonds, but also that, when the funds should be required from the banks, the transfer should be made by a draft against the balance carried by the depositary bank in the Federal Reserve Bank in favor of the account of the Treasury in the same Federal Reserve Bank. That is to say, payments on governemnt account should be made by use of the bank's credit and with no reduction of its stock of cash.

Not only were these rules applicable to receipts from the several Liberty Loans but also to receipts from income taxes and excess profits taxes, as well as from the sale of certificates of indebtedness which succeeded one another in rapid succession throughout the War and the following year. It was the custom of the Treasury to leave the credit as long as might be in the local depositary banks where it would serve the business community to the greatest possible degree, and require transfer to government account in the Reserve Bank only as it was actually needed, thence to be disbursed by government check. These transfers of credit were made ratably throughout the country —a certain percentage of the deposit on a specified date. The result of this policy was to make the depositary banks collection agencies of the government, while the Reserve Bank of each district became a disbursing agency to a degree unknown in the past. The effect of these operations on the distribution of the general fund at the end of the fiscal year 1917 is shown below:

In Treasury offices......	$107,662,952.07
In Federal Reserve Banks	300,671,632.42
In special depositaries...	783,922,959.51
In regular depositaries...	49,681,738.91
In Philippine Treasury..	2,081,409.76

In order to appreciate the effect of the new policy upon the business of the Federal Reserve Banks it is only necessary to remember that the ordinary disbursements of the Treasury rose from a total of 682 millions in 1913 to 15,365 millions in 1919. The premises of the Reserve Banks became scenes of the greatest activity. New and larger quarters had to be taken, branch banks were established, and the employed personnel grew from 920 at the end of 1916 to 9,459 at the end of 1919. In the same three years the number of

state banks admitted to membership grew from 37 to 1,481, and the gold reserve from 738 millions to 2,063 millions.

Changes Under Act of 1920

From this showing it may properly be inferred that the expansion involved in the transfer of the duties of assistant treasurers under the mandatory act of 1920 had already taken place before the act was passed. By the terms of the law a period of thirteen months was allowed for making the change. The Secretary of the Treasury was permitted to assign the duties of the assistant treasurers to the treasurer, the mints and assay offices and to the Federal Reserve Banks, in such manner as might in his opinion best promote the public interest. It was provided further that the Secretary of the Treasury might assign to the Federal Reserve Banks such rooms, vaults and equipment as might be needed, and the employes of the various subtreasuries should have preference in application for positions in other departments of the government. However, most of them were taken over by the Reserve Banks.

In order that the transfer of business might go forward with the least disturbance of routine the change was made by degrees. The subtreasury at Boston was closed on October 25, 1920, that at Chicago, November 3; New York, December 6; San Francisco, December 20; New Orleans, January 5, 1921; St. Louis, January 8; Baltimore, January 14; Philadelphia, February 3, and Cincinnati, February 10.

In the case of six of these cities the work was taken over by the Reserve Banks located there, but in New Orleans, Baltimore and Cincinnati the functions of the subtreasury were transferred to branches of Reserve Banks located in those cities. But functions of the Independent Treasury were not confined to banks and branches in the nine cities in which subtreasuries were to be found. By Treasury circulars issued August 30 and October 19, all the Federal Reserve Banks and their branches were definitely constituted fiscal agencies of the United States Treasury. The effect of this was to extend the facilities formerly available in only nine cities to thirty-five cities at the outset and to as many more as might be favored with a branch bank in the future.

One important duty of the subtreasuries had been to account for the special trust funds such as the gold coin held against United States notes, gold coin and bullion held against gold certificates, and the silver dollars held against silver certificates. The care of these funds was transferred to the Treasurer of the United States at Washington, to be assisted as may be desirable by the mints and assay offices.

Treasury Duties of Reserve Banks

The new duties now devolving upon the Reserve Banks are:

The receipt of gold coin and silver dollars for exchange; the receipt of United States notes, Treasury notes, gold and silver certificates, subsidiary and minor coin for redemption; the exchange of various forms and issues of money for others; the cancellation or cleaning of currency unfit for circulation; the receipt from depositary banks of internal revenue, customs, postal and other funds; the receipt of deposits from other than depositary banks for money payable to the government from many sources; the payment of United States interest coupons; the payment of checks and warrants drawn against the Treasurer, and the receipt of government funds for transfer to other points.

From what has been said it will be clear that the actual abandonment of the Independent Treasury did not greatly augment the work of the Reserve Banks. For example, on the date of transfer the bank at New York already held $11,298,000 of government deposits, while the subtreasury in that city, whose normal business was far greater than that of any other, held only $1,448,000. This sum was all in coin. The building was turned over to the use of the bank under a lease but the title remains in the government. In Minneapolis, where there was no subtreasury, the assumption of the new duties was not so easily effected. The vaults of the bank were not adequate to meet the new demands and outside vault space was rented. Moreover, the clerical staff was considerably enlarged. In San Francisco the entire staff employed in the subtreasury was taken over by the bank. The building was occupied under a lease and is used as a place of storage of coin, currency and bonds, and for the housing of such employes as are required for the custody and exchange of these bonds.

Significance of the New Policy

The importance of the change therefore consists not in the magnitude of the new enterprise which the Reserve Banks have undertaken but in the significance of it. For all this coin and currency, insofar as it belongs to the general fund, now becomes a part of the banking reserve of the country. Large disbursements of government funds will never again stimulate speculation on the stock exchanges nor will the collection of a great surplus of revenue cause a chill in the markets of staple products. By adjustments through the Gold Settlement Fund maintained by the Federal Reserve Board at Washington the Reserve Banks will be able to make the largest payments, collections and transfers without affecting the magnitude of the reserves at any point.

The Establishment and Scope of Branches of Federal Reserve Banks

By E. R. Fancher
Governor, Federal Reserve Bank of Cleveland

THE establishment and operation of the Federal Reserve Banks and branches is the direct result of intensive research and study on the part of economists, financiers and statesmen regarding the inadequacy of the banking system of the United States as developed under the national banking system, established in 1863, remodeled by enactment of Congress in 1864, and patched up from time to time by more than sixty legislative amendments. The national banking system as it formerly existed, was supplemented by the state banks and trust companies created by state laws, all functioning independently or separately. The entire system passed through various so-called panics up to 1907, at which time the attention of the whole country was brought sharply to the inherent weaknesses of our banking and credit system, while the crisis of that year compelled definite action along remedial lines. The system had proved inadequate to cope with modern commercial needs. It failed to supply commerce and in-

dustry with adequate credit facilities in normal times, and in times of financial stress it broke down completely, spreading disaster and ruin throughout the land.

The Aldrich-Vreeland Currency Act, approved by the President May 30, 1908, in providing for emergency currency based upon certain classes of securities other than government bonds, authorized the uniting of ten or more national banks in any one city or community into a "National Currency Association." It may be stated that that law was the beginning of the regional idea, and of its later development into the thought of additional services and conveniences to areas, communities or centers, which has brought about establishment of branches of Federal Reserve Banks. The National Monetary Commission was also authorized by the Aldrich-Vreeland Act.

Branches of First and Second Banks of the United States

Alexander Hamilton's original plan for the First Bank of the United States, organized in Philadelphia in December, 1791, did not contemplate the establishment of branches; but early in 1792 branches were opened in New York, Boston, Baltimore and Charlestown, and later, additional ones were opened at Norfolk, Savannah, Washington and New Orleans, making in all, eight branches.

In stating the advantages derived from the bank by the government, Secretary of the Treasury Gallatin laid stress upon the safe-keeping and transmission of the public funds, the economical collection of the revenue, and the aid furnished to the government in the matter of loans. The punctuality of payments introduced by the banking system, and the facilities afforded by the bank to importers indebted for revenue bonds, were among the causes which had enabled the government to collect with such facility and with so few losses, the great revenue derived from imports. The numerous state banks might afford considerable assistance to the government in its fiscal operations, but they could not effect the transmission of public funds with the same facility or to the same extent as the Bank of the United States through its several branches.

The Second United States Bank, chartered in 1816, commenced operations in January, 1817, and by October, 1817, nineteen branches in fourteen states had been designated, and, subsequently, eight other branches or agencies were established.

The establishment of branches was the most characteristic and the most essential feature of the plan of the First and Second Banks of the United States. Without them they would have been virtually useless to the government, unable to exercise an efficient control over the state banks, and incapable of furnishing accommodations in discounts and exchange throughout a country unprovided with a note circulation of uniform value, or with any extended currency.

The general control of the branches was almost wholly in the power of the central directorate through its authority to appoint the local directors and to create by-laws for the branches, the election of the president being the one important privilege left to the uncontrolled will of the branch directorates. It was, of course, essential to the safety of the bank, to the security of its operations and to the unity of its policy, that the control of the central board over the branch officials and directors should be real and effective.

Both the First and Second Banks of the United States became involved in

political strife without any intention of their own and in spite of their earnest efforts to avoid such entanglements.

These two central banks were very largely government instrumentalities; out of them grew the independent treasury system established in 1846, and from that time until the Civil War the government made its collections and disbursements entirely in specie and kept its funds in the Treasury and its branches, called subtreasuries. Important changes were made in this system during and after the war, bringing the Treasury into close relations again with the banking and credit system of the country.

THE INDEPENDENT TREASURY AND ITS BRANCHES

The national banking system, established in 1863, grew out of the financial difficulties of the Civil War. After the adoption of the independent treasury system in 1846, the government had no relation with the banks of the country, keeping its funds with the various subtreasuries established in several leading cities. When the war broke out the government was compelled to turn to the banks for help. Instead of meeting the war expenses by taxation, it resorted to loans, which could be obtained quickly only from the banks.

The policy of separating the fiscal activities of the government from banks and banking—which was adopted with the establishment of the independent treasury system—was discontinued when the national banking system came into existence, and thereafter the subtreasuries became largely depositaries of surplus coin, distributers of currency and coin, and redemption agencies.

Under the Aldrich-Vreeland Act there were formed no less than eighteen national currency associations, and in the bill suggested by the National Monetary Commission, as a result of its investigations, provision was included for a central reserve association, for at least fifteen branches of the parent association and for further districts when necessity might arise. All through the studies of the National Monetary Commission and in the various important writings of financiers and economists, the necessity for adequate accommodations in industrial communities or centers, the interest of which might demand direct personal contact with properly accredited representatives of the parent institution, was recognized.

POPULAR OPPOSITION TO CENTRAL BANKS

Throughout the history of the country, it is apparent that the people have been opposed to placing in one single institution the financial power which a central bank might exercise. This was manifest in the failures of both the First Bank of the United States and the Second United States Bank to secure charter renewal; and the antagonism which was most apparent during the administrations of President Jackson continued and asserted itself in the preparation of the legislation that finally resulted in the enactment of the Federal Reserve Act, approved by the President, December 23, 1913.

Division of the United States into regions, as begun in the formation of the Currency Association, prevailed in the Act; and the establishment of not exceeding twelve independent Federal Reserve Banks with power in each of the banks to establish and operate branches was provided.

The original law, Section 3 of the Act, was as follows:

Each Federal Reserve Bank shall establish branch banks within the Federal

Reserve district in which it is located and may do so in the district of any Federal Reserve Bank which may have been suspended. Such branches shall be operated by a board of directors under rules and regulations approved by the Federal Reserve Board. Directors of branch banks shall possess the same qualifications as directors of the Federal Reserve Banks. Four of said directors shall be selected by the Reserve Bank and three by the Federal Reserve Board, and they shall hold office during the pleasure, respectively, of the parent bank and the Federal Reserve Board. The Reserve Bank shall designate one of the directors as manager.

The Organization Committee, provided in the Act, gave consideration to these provisions and reported at length regarding the development of branches. The final recommendations of the Committee, in part, were as follows:

It is recommended that in the event of the establishment of such branches they be assigned a proportionate capitalization based upon the capitalization and surplus of the member banks included within the territory assigned to the branch. This, however, should be only a tentative matter, and such assignment of resources should be merely to bridge over the period during which it is found from experience about what amount of paper will on the average be presented by the banks in each branch district. When sufficient experience has been had to determine this point the resources to be employed should be distributed among the branches in proportion to the quantity of paper presented on the average by the member bank in each such branch district.

It is recommended further that the parent bank of the district shall in every case retain for itself a substantial portion of the district as a territory from which paper shall be directly presented for rediscount. This would mean simply that the branch districts would be established whenever there was a special need for them in a particular part of a district which presented a clear cut, independent trading area, whose territory was an economic unit and whose member banks naturally stood in close relationship to one another. The suggestion also amounts to a rejection of any plan for subdividing a district completely into branch areas while the District Reserve Bank itself exercised no distinct banking functions except those of oversight. It is believed that this latter plan would not be desirable, but that in every district there should be a strong independent Reserve Bank organization performing actual banking functions and directly rediscounting the paper of a considerable number of the member banks included within such district.

In responding to criticism of the Organization Committee in fixing Federal Reserve districts and designating Federal Reserve cities, the Honorable Carter Glass, then Chairman of the House Committee on Banking and Currency, stated early in 1914:

With my knowledge of facts and study of the situation, covering a period of sixteen months, I would not, had I the power, make more than a single change in the districts as defined by the Organization Committee, and that change I do not care to point out, as no good could be expected from any suggestion that now might be made. Referring again to the relative importance of the branch banks and the regional Reserve Banks, in the practical operation of the system, no business center will lose its identity nor have its business relations seriously interrupted. The banking operations and the commercial transactions of any given territory will be practically maintained as they exist today, for the reason that such territory will transact its business with the branch bank, if more convenient than with the regional reserve bank, so that there is no earthly reason why any large financial or commercial community should be in the least degree uneasy over the prospect of losing any business which it now commands.

Early Disadvantages

In the original Federal Reserve Act, the mobilization in the Federal Reserve

Banks of reserves of member banks extended over a period of thirty-six months. In carrying these provisions of the law—as long as they existed—into effect, it became apparent that the cities in which Federal Reserve Banks were located had an advantage over cities of former equal standing, especially in regard to accounts of country banks, and the advantage of correspondent banks in Federal Reserve cities was further accentuated when the early steps in the par collection of checks were taken. At first, banks in the other cities endeavored to offset the advantage by maintenance of excess reserves in the Federal Reserve Banks and agreement for immediate charging against such reserves of their checks by the Federal Reserve Banks. This proved both burdensome and unsatisfactory.

In its Second Annual Report to Congress, for the year 1915, the Federal Reserve Board states:

The question of branches of Federal Reserve Banks has received careful attention during the past year. There has been intimation from several quarters that the establishment of a branch at a given point would be acceptable to the banks of that place. Only in one instance—that of New Orleans—did the Board receive a definite request from a Federal Reserve Bank to establish a branch. Believing that New Orleans and the adjacent territory could make advantageous use of this additional banking machinery, the Board authorized the establishment of a branch of the Federal Reserve Bank of Atlanta to be located in New Orleans, and this branch was opened for business on September 10, 1915. Operations at the New Orleans branch have proceeded satisfactorily, and the institution has been of considerable use to the local banks. The branch is already more than self-supporting.

Investigation and experience have seemed to show that, at least for some years to come, the organization of branches with completely equipped offices, vaults, and the like, and with a full staff of salaried officials, will be too heavy an expense for most of the reserve banks, yet, that valuable service could be performed by local offices of the several banks in not a few places. The Board has, therefore, had under consideration the question whether establishing local agencies might not meet the requirements of the case better than the more fully organized branch office. Competent legal opinion is to the effect that the creation of such local offices is permissible under the terms of the law, and the Board believes that it may prove practicable to meet banking necessities in many sections of the country by this means.

The entrance of the United States into the Great War in April, 1917, forced upon the Federal Reserve Banks greatly increased responsibilities and duties. By reason of the government's financial requirements and the assistance rendered to member banks to enable them to meet obligations and give the wonderful support accorded by the banks to the nation's demands, the Federal Reserve Banks were enabled to show substantial earnings, and, on account of the favorable position thus attained, the early establishment of branches was possible.

The section of the Act relating to branches was amended in June, 1917, and in its Fourth Annual Report, the Federal Reserve Board made the following statements:

As originally enacted, this section provided that each Federal Reserve Bank "shall establish branch banks" to be "operated by a board of directors under rules and regulations approved by the Federal Reserve Board," and provided also that there be seven directors having the same qualifications as directors of Federal Reserve Banks. The section as now amended provides that the Federal Reserve Board may permit or require any Federal Reserve Bank to establish branches within its district, and that such branches, subject to such rules and regulations as the Federal

Reserve Board may prescribe, shall be operated under the supervision of a board of directors to consist of not more than seven or less than three directors, of whom a majority of one shall be appointed by the Federal Reserve Bank of the district and the remaining directors by the Federal Reserve Board.

During the year branches have been established at Omaha by the Federal Reserve Bank of Kansas City, at Louisville, by the Federal Reserve Bank of St. Louis, and at Portland, Seattle and Spokane, by the Federal Reserve Bank of San Francisco, and are now in operation. The Board has, in addition, authorized the establishment of branches at Pittsburgh and Cincinnati by the Federal Reserve Bank of Cleveland, at Detroit, by the Federal Reserve Bank of Chicago, at Baltimore, by the Federal Reserve Bank of Richmond, and at Denver by the Federal Reserve Bank of Kansas City. It is expected that all of these branches will begin business at an early date.

The policy of the Board in the establishment of these new branches has been to recognize the unity and paramount responsibility of the Federal Reserve Bank, while extending full facilities to the banks in the territory served by the branch. By avoiding duplications in bookkeeping, and by a consolidated control of accounts at the Federal Reserve Bank, it is expected that branches can be operated at a comparatively small expense.

In the organization of the branches in the various Federal Reserve districts, the parent banks have retained definite portions of their districts in which they exercise distinct banking functions for member banks, and have delegated to the branches like functions for member banks in territories or areas assigned to such branches.

Branches Are Subsidiary

There are now in operation twenty-four branches of the twelve Federal Reserve Banks. These branches have all been located in the several districts in harmony with the underlying direction of the Act that they shall exist "with due regard to the convenience and customary course of business." The actual operation of all the branches in the final results is subsidiary to the parent banks and forms part of their functions. The figures of the branches are embraced in the reports and statements of their parent. Matters of policy and questions of operation are determined by the head offices in the respective districts.

By reason of remoteness from the head office, some of the branches maintain separate books and perform practically all of the functions of the parent bank in relations with member banks in their assigned zones or territories. In others, a method prevails by which all figures and accounts are maintained in the head office through private telegraphic connections with the branches and under a satisfactory system of communication and accounting.

Functions of Branch Banks

The powers and functions exercised by the branches of the Federal Reserve Banks embrace:

(1) Receiving deposits of member banks and the government;

(2) Paying out currency and coin to banks;

(3) Receiving from member banks applications for loans and discounts and tenders of bills eligible for purchase by Federal Reserve Banks, and examining all paper presented for technical defects, generally passing immediate credit for proceeds subject to final review by the head office;

(4) Operating city and country collection departments for handling of bonds, coupons, notes, trade acceptances, sight, time, and documentary drafts, insurance and railroad vouchers, and certificates of deposits;

(5) Operating a transit department

for handling checks and bank drafts and other cash items payable on demand;

(6) Clearing of checks and drafts and other clearable items payable through clearing houses in cities wherein branches are located;

(7) Making wire transfers to and from other Federal Reserve and branch cities for member banks in branch territory;

(8) Converting, exchanging and interchanging all issues of Liberty Loan bonds, Victory Liberty Loan notes and certificates of indebtedness;

(9) Redemption of United States securities, coupons, War Savings Certificates and stamps.

In the establishment of branches of the Federal Reserve Banks, efforts were made to give to those communities wherein the branches are located the fullest measure of Reserve Bank service demanded by banking and business conditions within limits of reasonable expenditure and avoiding unnecessary duplication of work. In each branch there is maintained an adequate currency supply to meet the needs of the community. The subtreasuries were discontinued, prior to July 1, 1921, under an amendment by Congress to the organic law, and the functions and duties of those offices have been undertaken also by the Federal Reserve Banks and branches.

Branches Aid Collections

The branches have been notably effective in the collection operations as developed in the Federal Reserve System. Checks and drafts and other collection items upon banks in a given branch or parent bank territory are sent directly to the branch or bank serving that territory by all other Federal Reserve Banks and branches, and arrangements have been perfected permitting the larger member banks in the centers to send direct to the proper Federal Reserve Bank or branch all such items payable in its respectively allotted areas.

It is apparent that, in every practicable way, the banks in cities and areas wherein branches of Federal Reserve Banks are located are accorded all the facilities and services of the System in like manner as those in designated Federal Reserve cities. Capital stock adjustments and dividend payments naturally appertain to the head offices, and these functions are necessarily reserved, but otherwise the branches render available in their cities and assigned areas all Federal Reserve banking powers.

A notable instance of the use to which these facilities have extended is that, in one of the leading branches during the calendar year, 1920, over $510,000,000 in currency was deposited, and approximately $490,000,000 paid out and about 14,000,000 checks, aggregating nearly $9,000,000,000, were handled by this one branch.

Branch Banks Growing Rapidly

In many of the locations the facilities demanded and accorded have already assumed such magnitude and importance as to require the services of large clerical staffs occupying considerable office space, and in not a few instances, already, the branches have been compelled to acquire separate buildings or to plan independent quarters in order to secure proper safeguards and efficient handling of the volume of work passing through their hands. Some of the Federal Reserve Banks now have under consideration necessary office location of branches; some branches now already established are being placed in their own buildings, the property of the parent banks. It is manifest that considerable expendi-

ture by the Federal Reserve Banks for office buildings and vaults for branches is necessary in order to conduct the work properly.

It is not improbable that in the future development and progress of the Federal Reserve System, there will arise the necessity for the location of other branches to meet the demands or requirements of business communities or industrial centers. These situations will be met and provided for and any additional functions which may be properly assumed by the Federal Reserve Banks will likewise be allotted to the branches.

Curves of Expansion and Contraction, 1919–1921

By A. C. Miller

Federal Reserve Board, Washington, D. C.

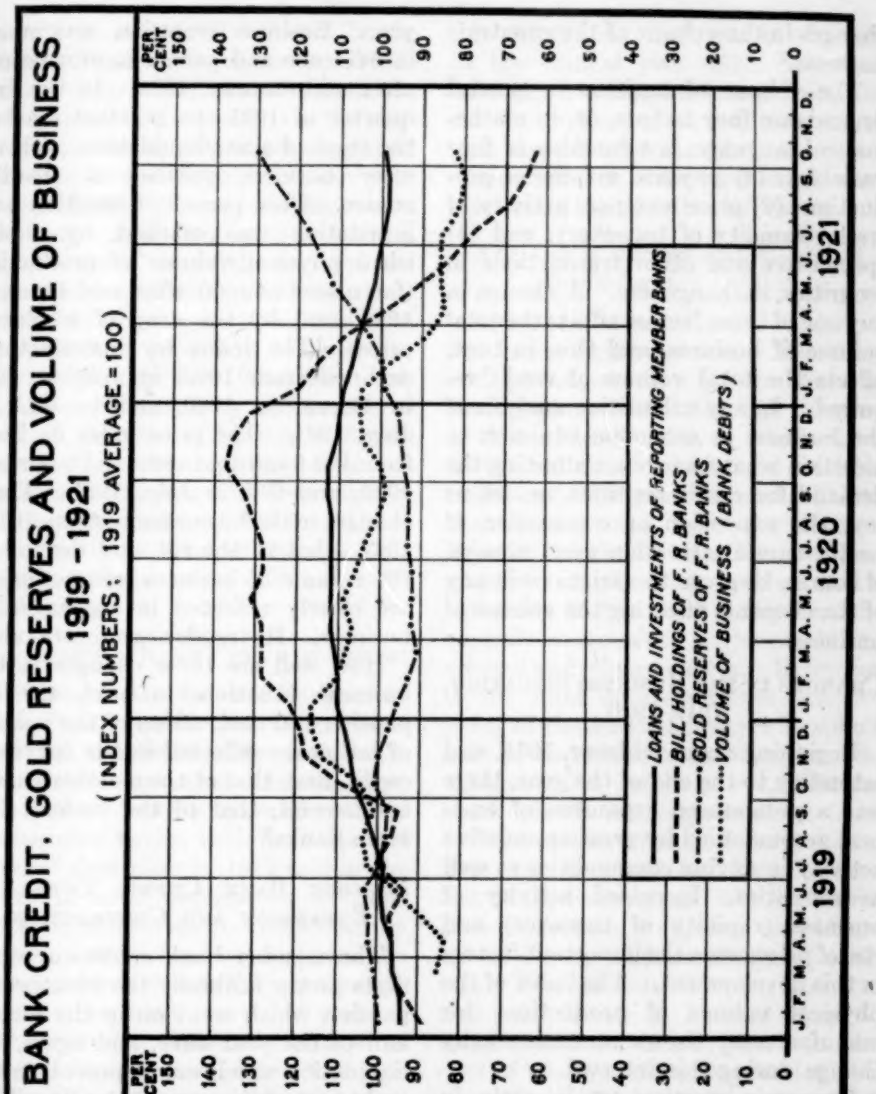
THE economic vicissitudes through which the country has passed during the past year have brought to everyone a vivid and memorable experience of the actualities of expansion and contraction and have made the study of the conditions which eventuate in these violent alternations of the curves of business and credit, a matter of profound practical importance.

War, and its immediate aftermath of business inflations, made the credit expansion. After-war readjustment, with its inevitable liquidation, has made the credit contraction. So much is already clear from the outside point of view and is now admitted by most fair-minded people. But what is further revealed and how does the matter look when the operations of the banking system are viewed from the nearby, or Federal Reserve, point of view? For this whole recent experience raises some questions of great moment with regard to the functioning of the country's new credit mechanism.

It is not the purpose of this discussion to go into the economics of the expansion and contraction of 1919–1921. It is not at all concerned with questions of economic causation. No attempt will be made to determine whether expansion or contraction of credit caused expansion or contraction of business and the rise and fall of prices, or whether the movement of credit was determined by the movements of business and prices. The correlation of the business and financial factors involved in the economic developments of the past three years presents too complex a problem to be undertaken within the limits of this paper. For the assistance of any who are ambitious to penetrate the economic mysteries of recent expansion and contraction, there is, nevertheless, appended to this article a collection of data covering most of the determinable factors involved in the problem. In order to make the fluctuations in the different items comparable, they are expressed in the form of index numbers based on the 1919 average. A second table shows the absolute figures upon which the index numbers of banking are based.

Measurement of Expansion and Contraction

The object of the present discussion is to ascertain what light recent experience throws on the question as to whether the Reserve System possesses a sensitive and accurate indicator of changes in the credit and business



situation—or, let us say, of expansion and contraction.

The above chart brings out the essential developments for this purpose. The two curves of credit on the chart show, respectively, changes in the bill holdings of the Federal Reserve Banks and changes in the loans and investments of the reporting member banks.[1] The third curve shows changes in the gold holdings of the Federal Reserve Banks, and the fourth,

[1] Consisting of some 800 of the largest banks of the country which report weekly to the Federal Reserve Board. These banks represent about 40 per cent of the banking resources of the country, and changes in their condition may be taken as typical of changes in the banking situation in general.

changes in the volume of the country's business.[2]

The volume of business in general depends on four factors, or, in mathematical language, is a function of four variables: (1) physical volume of production; (2) price level; (3) activity of trade (rapidity of turnover); and (4) speculative and other transactions in securities, exchange, etc. A change in any one of these factors affects the total volume of business, and this, in turn, affects the total volume of credit required. In any exhaustive analysis of the business or economic situation to ascertain what factors are affecting the demand for credit facilities, or, let us say, the expansion or contraction of credit, careful attention must always, of course, be given to variations in any of the elements affecting the volume of business.

CHANGES IN THE BUSINESS SITUATION, 1919–1920

Beginning about midyear, 1919, and extending to the end of the year, there was a pronounced expansion of business accompanied by great speculative activity involving commodities as well as securities. Increased activity of business (rapidity of turnover) and rise of prices were the important factors in this development. The index of the physical volume of production (for manufactures) shows no noteworthy change during this interval.

Economic reaction set in early in 1920, and continued throughout the year. Business recession was much in evidence and gained in momentum after mid-summer, 1920. In the first quarter of 1921 the reaction reached the stage of acute liquidation. Thereafter business pursued a steadier course. This period of reaction and liquidation was marked by diminished physical volume of production (for manufactures) after mid-summer, 1920, and by the drop of wholesale prices. The index for manufactures declined from 102.3 in July to 77.9 in December, 1920, and to 68.5 in July, 1921. The price index declined from 123.6 in July to 89.2 in December, 1920, and 69.8 in July, 1921. These changes in the business situation, 1919–1921—that is, the rise and the fall in the volume of business transactions—are clearly reflected in the curve of business. Its trends are unmistakable.

How well are these changes in the business situation—in brief, the expansion and contraction of the volume of business—reflected in the curves of credit, first, that of the member banks, and second, that of the Federal Reserve Banks?

MEMBER BANK CREDIT CURVE OF EXPANSION AND CONTRACTION

The member bank credit curve reflects pretty faithfully the business expansion which went on in the second half of the year 1919, and again, the liquidation which was in process in the early part of the year 1921. It will be noticed that the liquidation of the loan account of the reporting member banks in the first six months of the year 1921 approximately cancels the expansion of the loan account of these banks in the second six months of the year 1919. Through the year 1920, however, it will be noticed that the curve of credit of the member banks shows a different trend from the curve of business. The business recession which was in process

[2] As measured by debits to individual accounts in banks in about 150 leading clearing-house centers. In order to eliminate short-time fluctuations due to the difference in the number of business days in a month, to mid-month and end of the month payments, and to Treasury operations in connection with the quarterly installment of income taxes, the volume of business curve on the chart has been smoothed by means of a moving average which shows for each month the average volume of business for the month and the two preceding months.

in 1920 is not at all reflected in the member bank curve of credit. There was no contraction of credit until the last quarter of the year. On the contrary, the banks were expanding their accommodation throughout the year and until after the crop-moving season was over. Agriculture was in distress, while business was in the midst of the crisis of readjustment and needed assistance in effecting the transition from the period of expansion through the period of liquidation. That assistance was being extended by the banks, as both of the curves of credit clearly indicate, and thus was liquidation of business moderated and kept orderly by comparison with what it would have been, had it not been for the steadying and easing influence of our new credit machinery.

THE RESERVE BANK CURVE OF CREDIT

Turning to the Reserve Bank curve of credit, it appears that the curve of credit of the Federal Reserve Banks parallels the curve of business more closely than does the curve of credit of the member banks, both in the period of rapid expansion in 1919 and in the period of acute liquidation in 1921. It will be noticed on the chart that the Reserve Bank curve of credit in the period under review twice cuts through the member bank curve of credit—once in October, 1919, on the upward swing of business, and again in April, 1921, on the downward swing of business. By comparison with the member bank curve, the ascent of the Reserve Bank curve was more pronounced on the rise, as was also its descent on the fall. On the other hand, throughout nearly the whole of 1920, when the business curve was showing a decided downward trend (until the last quarter, when a slight rise is shown due to seasonal influences) the Reserve Bank curve of credit showed an opposite, or upward, trend. Both curves of credit in the critical year 1920, therefore, followed a different trend from the curve of business, but it is noteworthy that the difference is much more pronounced in the Reserve Banks' curve than in the member banks' curve.

THE GOLD INFLUX AND RESERVE BANK CREDIT CURVE

There still remains to be considered the curve of gold reserves. The sharp and prolonged drop in the Reserve Bank curve of credit through the year 1921 and the liquidation which it reflects cannot be understood without reference to the great influx of gold into the country and into the Federal Reserve Banks, which has been in process during the past twelve months. Reference to the chart brings out the opposite movements in these two significant and related curves. Reference to the index numbers shows that the index of the Federal Reserve System's gold holdings rose from 94 in October, 1920, to 130 in October, 1921, while the index of bill holdings declined from 137 in October, 1920, to 63 in October, 1921. Over 45 per cent of the liquidation of the loan account of the Federal Reserve System, it appears, may be attributed to the increase of its gold holdings. The influence to be attributed to the gold factor in Federal Reserve Bank liquidation is still greater in the case of the Federal Reserve Bank of New York, which has been the chief recipient of the gold flowing from Europe to our shores. The index of bill holdings for that bank fell from 126 in October, 1920, to 37 in October, 1921. Its gold index for the same period shows a rise from 74 to 156. The gold factor is thus seen to account for over 73 per cent of the liquidation experienced by the loan account of the Federal Reserve Bank of New York.

The great stream of gold which has

poured into the United States from Europe during the past year has come in liquidation of foreign indebtedness to us, and has been turned over by member banks to the Federal Reserve Banks in liquidation of their own indebtedness. The pronounced and continuous downward trend of the Reserve Bank loan curve during the past year is therefore seen to be due largely to foreign liquidation. The course of business shows considerable steadiness after the first quarter of 1921, and the member bank curve of credit, after the second quarter; but the Reserve Bank curve of credit continues its downward course in 1921 without abatement in quick and close response to the continuously upward course of the curve of gold reserves. As an indicator of the degree and rapidity of domestic liquidation, the Reserve Bank curve of credit is misleading, owing to the disturbing influence of the gold factor.

The Reserve Bank Curve of Credit the More Sensitive Indicator of Credit Change

Comparing the two curves of credit with one another, it is clear that while both curves are influenced by the same changes in the business situation, their response is not the same. A glance at the chart brings out the fact that the Reserve Bank curve moves very much more readily and markedly than the member bank curve. The member bank curve appears flat by comparison with the Reserve Bank curve, and gives a less lively impression of the business and credit developments and changes which were in process. What is the explanation of the difference, and which of the two curves is the better index of expansion and contraction?

The relative flatness of the member bank credit curve during the year 1920 as compared with the Reserve Bank curve is due to several circumstances, some transitory in character. It will be recalled that the loan and investment account of the banks of the country was greatly swollen during the War by heavy investments in Liberty bonds and Certificates of Indebtedness, and by accomodation granted subscribers to government war loan issues. After the War, the process was reversed. There has been constant liquidation of bank holdings of government securities and of loans collateraled by such securities. Reporting member banks' holdings of government securities dropped from 3,083 millions in May, 1919, to 1,938 millions in January, 1920, and 1,318 millions in January, 1921. Figures of holdings of paper secured by government securities are not available until December, 1919, when they amounted to 1,337 millions. From this point they declined to 899 millions in December, 1920, and 577 millions in October, 1921. The liquidation in the loan and investment account of the member banks from these sources has therefore been very considerable. But it does not appear to be reflected in the movement of the member bank curve of credit in 1920. That curve was ascending in spite of liquidation from these sources. But had it not been for this liquidation, it is altogether reasonable to assume that it would have ascended still more. The credit thus released by liquidation of war loan securities and paper was apparently being used to expand the commercial and speculative loan accounts of the banks.[3]

[3] Something similar occurred in the early autumn of 1919, when it will be noticed the member bank curve was rising, while the Reserve curve was declining, the banking expansion then in process being able to proceed without increased borrowings from Federal Reserve Banks. This is explained by the fact that the floating debt of the government was reduced at this time by almost 500 millions of dollars, the banks using the funds thus made available to them for the expansion of their commercial loans.

When we come to the period of liquidation in the autumn of 1920 and the following winter, there appeared an influence of an opposite character to that just described—namely, the so-called "frozen credit." By "frozen credit" is meant credit that has continued its existence beyond the time when the transactions which gave rise to the credit should normally have liquidated themselves. It is made up of credits which have not been liquidated because the transactions underlying the credits have not been able to run their course and liquidate themselves. It is well known that large volumes of goods produced last year have been carried by the producers for lack of satisfactory markets. Prices were falling, markets were collapsing, and there was congestion of goods at points of primary production and distribution. The owners of these goods had to be "carried." There is no means of approximating the amount of these frozen credits, but there is reason to believe that they constitute a very substantial fraction of the total loans and discounts carried by the commercial banks of the country.

The member bank loan curve shows resistance to the forces of liquidation. It was this retarded or "orderly" liquidation which kept the curve from descending as swiftly as it otherwise would have if it had been influenced merely by the volume of current business transactions. Moreover, the liquidating power of a dollar paid in by a member bank to its Reserve Bank in a period of liquidation appears, on the basis of the past two years, to be very much less than the credit-supporting power of a dollar loaned by a Federal Reserve Bank to a member bank in a period of active expansion.[4] And furthermore, the Federal Reserve Bank loan curve, as has already been pointed out, represents in a peculiar degree the liquidating effect on the Federal Reserve loan account of the huge influx of gold which has been continuous during the past twelve months. Besides these transitory influences which have helped to give the member bank loan curve a relatively flat character, there is the additional important and regular influence exercised by the far greater volume of member bank loans compared with Reserve Bank loans. Owing to the fact that the base figure is much larger for member banks than for Reserve Banks, the same change in absolute amounts will result in a much larger percentage change and, consequently, in a much steeper movement in a Reserve Bank curve than in a member bank curve. But this arithmetical fact does not fully explain the discrepancy. There is a further reason of an economic character to be noted in a study of the curves of expansion and contraction.

The great bulk of the loans of the member banks at any time represents loans incident to the ordinary volume and requirements of business, and

[4] During the period of expansion between 1919 and 1920 (dates for which information is available being June 27, 1919, June 25, 1920, and June 29, 1921) the increase in the loans of the member banks was 6.7 times as great as the increase in the discounts of the Federal Reserve Banks, while during the following year the decrease in the loans was only 2.3 times as large as the decrease in Federal Reserve Bank discounts. For the reporting member banks, for which data on more significant dates are available (July 25, 1919, before the speculative expansion began, October 15, 1920, when the peak was reached, and November 2, 1921, the latest date for which data are available) their investment and loan account increased 3.2 times as fast during the period of expansion as their borrowings from the Federal Reserve Banks, while during the period of liquidation the reduction in the investment and loan account of the reporting member banks is 1.6 times as large as the corresponding reduction in their borrowings from Federal Reserve Banks.

exercises, even in times of marked changes in the business situation, a steadying influence on the member bank credit curve. The situation of the Reserve Banks is different. Their loan account does not reflect the normal volume of credit in use. Under normal conditions, their operations are not large. It is not the absolute amount of credit in use, but the ebb and flow of credit, which affects the loan account of the Federal Reserve Bank. The Federal Reserve Bank has little part in the ordinary credit business of the country. It does not deal with business borrowers directly. The relations of the business man are with his member bank, the member bank in turn dealing with the Reserve Bank as occasion may necessitate. The Federal Reserve loan is not the first line of credit, but the second line of credit. The expansion and contraction of the Reserve Bank loan account are twice removed from the expansion and contraction of the volume of business as reflected in commercial bank loans.

The Federal Reserve is called into activity when the supply of ordinary credit facilities is inadequate. It supplements the resources of its members. It is, so to speak, the increments and decrements in the country's credit requirements that are reflected in the upward and downward movement of the Federal Reserve loan account. It is when business is speeding up beyond their normal credit capacity that the commercial banks must resort to the Federal Reserve Banks for accommodation. When business is receding and liquidating in a period of economic reaction, slackening of credit requirements will result in a marked reduction of borrowings from Federal Reserve Banks. The Reserve Bank curve consequently reflects movement, change —the *more* or *less* of credit required— and not the actual total volume of credit in use by business. On a relative basis the Reserve Bank curve has a tendency to magnify what is in process in times either of rapid expansion or of acute liquidation; in other words, to give an exaggerated or heightened impression of these movements.

A Guide to Credit Policy

Therein consists its importance as an administrative guide. While it may be faulty as a gauge of the degree of credit expansion or contraction, its very sensitiveness gives it a peculiar value as a quick indicator of what changes in the business and credit situation are in process or even impending. For while the Reserve Bank curve, during the period under review, has been over sensitive and gives an exaggerated impression of credit developments, the member bank curve, for reasons already discussed and primarily because, at any moment, it is more influenced by what has taken place than by what is taking place, tends to give an inadequate impression of changes which are in process, at least so far as they affect the credit situation. In times of rapid expansion or contraction, it is not the total volume of outstanding bank loans which is significant, but additions to that volume, or reductions in it. From this point of view, the Reserve Bank curve is a truer index of business and credit development than the member bank curve, and a better guide to credit policy.

INDEX NUMBERS OF BANKING AND BUSINESS DEVELOPMENTS: 1919–1921
(Monthly averages for 1919 = 100)

	All Federal Reserve Banks			F. R. Bank of New York			Reporting Member Banks			Volume of business [b]	Wholesale price index [c]	Volume of manufacture [d]
	Bill holdings	Gold reserves	F. R. note circulation	Bill holdings	Gold reserves	F. R. note circulation	Loans and investments [a]	Net demand deposits	Accommoda-tion at F. R. Banks			
1919												
January..	89	99	97	94	95	92	94	95	88	....	95.8	101.6
February.	93	100	95	100	92	90	94	94	94	....	92.9	86.7
March...	96	101	96	97	105	96	96	95	98	85.6	94.8	92.6
April	96	102	98	93	115	100	96	96	97	83.3	95.8	93.7
May	97	102	97	98	112	101	98	99	101	88.7	97.6	95.7
June	93	103	96	89	119	100	99	98	92	95.1	97.6	95.9
July.....	100	99	97	106	98	102	98	100	98	102.5	103.3	101.9
August ..	97	98	98	98	94	102	101	102	94	103.4	106.6	107.2
September	95	98	101	89	94	102	103	104	93	101.2	103.8	103.8
October..	109	101	105	109	91	103	106	105	112	104.6	105.2	104.4
November	118	100	108	114	94	104	107	107	119	113.5	108.5	102.2
December	119	98	113	114	91	108	108	106	117	116.4	112.3	102.1
1920												
January..	122	96	111	119	87	105	110	109	121	116.7	117.0	115.9
February.	128	93	114	126	83	110	110	108	136	111.0	117.5	104.6
March...	128	91	117	123	77	113	111	109	138	108.4	119.3	118.0
April	128	92	118	117	86	114	112	109	139	107.1	125.0	108.8
May	131	92	119	122	86	115	112	109	140	108.6	128.3	111.8
June.....	128	92	119	120	84	116	112	109	133	106.9	126.9	109.6
July.....	128	93	121	122	81	117	112	108	135	103.6	123.6	102.3
August ..	131	93	122	125	75	116	112	107	139	101.2	117.9	104.9
September	133	93	126	118	76	117	113	107	142	98.4	114.2	101.4
October..	137	94	128	126	74	119	113	106	150	100.3	106.1	101.2
November	136	95	128	125	74	119	111	104	148	104.3	97.6	88.9
December	132	96	128	124	71	118	110	102	143	104.6	89.2	77.9
1921												
January..	120	99	121	116	65	109	109	102	131	104.7	83.5	78.3
February.	115	100	117	114	64	108	107	100	126	98.2	78.8	75.0
March...	109	103	115	102	78	108	106	98	121	90.1	76.4	80.6
April	100	107	110	84	101	104	104	96	108	85.0	72.6	75.8
May	91	112	107	75	106	98	102	96	96	85.9	71.2	79.3
June	83	115	103	59	128	94	101	96	85	85.9	69.8	75.9
July.....	78	118	100	53	132	89	99	95	79	85.2	69.8	68.5
August ..	70	122	96	49	134	87	98	94	67	81.6	71.7	....
September	66	127	95	39	150	87	98	94	61	80.2	71.7	....
October..	63	130	94	37	156	86	99	95	57	82.3	....	....

[a] Including rediscounts with Federal Reserve banks.
[b] As measured by debits to individual accounts, three-months' moving averages.
[c] U. S. Bureau of Labor Statistics.
[d] Harvard Committee on Economic Research.

BANKING DATA: 1919–1921

(Monthly averages: amounts in millions of dollars)

	ALL FEDERAL RESERVE BANKS			F. R. BANK OF NEW YORK			REPORTING MEMBER BANKS			Ratio of F. R. accommodation to total loans and investments (per cent)
	Bill holdings	Gold reserves	F. R. note circulation	Bill holdings	Gold reserves	F. R. note circulation	Loans and investments*	Net demand deposits	Accommodation at F. R. Banks	
1919										
January	1,992	2,100	2,534	757	611	676	14,178	10,048	1,306	9
February	2,084	2,119	2,465	804	593	665	14,257	9,908	1,400	10
March	2,147	2,138	2,506	780	677	709	14,578	10,115	1,449	10
April	2,138	2,156	2,547	751	740	738	14,559	10,135	1,443	10
May	2,168	2,177	2,532	795	721	743	14,886	10,439	1,497	10
June	2,089	2,177	2,500	721	765	736	14,969	10,393	1,361	9
July	2,241	2,112	2,527	852	632	749	14,813	10,604	1,454	10
August	2,174	2,079	2,543	789	602	748	15,204	10,800	1,395	9
September	2,136	2,086	2,627	718	605	753	15,577	10,984	1,383	9
October	2,436	2,136	2,742	883	587	756	15,961	11,140	1,660	10
November	2,633	2,116	2,821	923	607	761	16,143	11,330	1,765	11
December	2,661	2,089	2,959	921	587	796	16,337	11,244	1,739	11
1920										
January	2,720	2,037	2,892	963	557	775	16,670	11,576	1,803	11
February	2,867	1,979	2,962	1,018	535	810	16,630	11,482	2,019	12
March	2,856	1,936	3,041	997	498	834	16,813	11,600	2,053	12
April	2,853	1,950	3,075	949	552	838	16,935	11,546	2,069	12
May	2,934	1,943	3,092	981	555	848	16,941	11,506	2,085	12
June	2,857	1,964	3,115	968	538	857	16,926	11,499	1,981	12
July	2,875	1,975	3,145	985	518	860	16,876	11,466	2,005	12
August	2,933	1,974	3,172	1,006	483	854	16,862	11,299	2,072	12
September	2,973	1,975	3,277	956	490	862	17,012	11,286	2,117	12
October	3,071	1,998	3,338	1,014	477	872	17,147	11,266	2,222	13
November	3,033	2,011	3,329	1,013	474	876	16,827	11,027	2,200	13
December	2,952	2,043	3,344	1,005	459	871	16,692	10,823	2,132	13
1921										
January	2,692	2,092	3,159	938	415	805	16,402	10,816	1,947	12
February	2,570	2,127	3,054	922	413	793	16,131	10,583	1,878	12
March	2,444	2,192	2,986	826	500	791	16,021	10,404	1,792	11
April	2,241	2,283	2,871	676	650	764	15,733	10,201	1,601	10
May	2,039	2,370	2,784	608	682	723	15,466	10,194	1,421	9
June	1,865	2,439	2,682	479	822	690	15,319	10,182	1,267	8
July	1,735	2,503	2,594	432	846	657	15,020	10,037	1,167	8
August	1,566	2,598	2,506	396	862	638	14,876	9,921	996	7
September	1,471	2,694	2,485	315	966	638	14,857	9,953	906	6
October	1,415	2,755	2,452	298	1,001	634	14,897	10,107	854	6

* Including rediscounts with Federal Reserve banks.

Expansion and Contraction Under the Federal Reserve System

By ERNEST MINOR PATTERSON
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MUCH confusion of thought on thesubject of expansion and contraction is due to our failure to distinguish clearly between three different problems. An economic system, which operates on a money and credit basis, and which maintains business relations with the systems of other countries, cannot well escape these difficulties. Each of the three facts involved is at times referred to as "depreciation."

THE THREE KINDS OF "DEPRECIATION"

One of them is the relation of a given financial system, such as that of the United States, to that of other countries as reflected in foreign exchange quotations. The British pound is worth at mint par $4.8665, the German mark, 23.8 cents, the French franc, 19.3 cents and so on. When, as at present, these moneys are bought and sold in our markets at about $3.80, one-third of a cent and 7.25 cents, respectively, it is customary to say that the moneys of those countries are depreciated. During the late War the moneys of the belligerent countries were thus depreciated in the United States, while at the same time our money was depreciated in certain neutral countries.

The causes of such a condition we need not here explain, but one point needs emphasis. In every case where such depreciation occurs there is merely an increase in the value of the first money in terms of the second and a decrease in the value of the second in terms of the first. In terms of the American dollar the pound sterling is now lower than usual, and in terms of the pound sterling our dollar is higher than usual. For a period of time several years ago the American dollar was lower than usual in terms of the money of Sweden, and Sweden's money was higher than usual in terms of our dollar. Foreign exchange quotations are for the most part merely a barometer or index, an effect and not a cause, but what they state is a change in the relative position of the moneys of two countries. The appreciation of one involves the depreciation of the other, and vice versa.

A second kind of depreciation is found when one form of money, say the standard money gold, changes in its relationship to some other form of money in the same country. Such a change occurred in the United States during the Civil War, when the "greenbacks" or United States notes were issued in very large quantities and were acceptable at less than their face value in exchange for gold. At one time a dollar of gold would purchase as much as $1.85 in greenbacks. The greenbacks had depreciated in terms of gold, and gold had appreciated in terms of greenbacks. Again it is a question of the relationship between the two.

A third type of depreciation is to be observed when the general price level changes. If prices in general rise to a higher level than that of the past it may be said that the value of commodities in the country has appreciated in terms of money and that the value of the money has depreciated in terms of the commodities. Similarly, if the general price level falls, there is an appreciation of the value

of the money in terms of commodities and a depreciation of the value of the commodities in terms of money.

These three forms of depreciation are well understood by most persons who are at all acquainted with financial questions. Nevertheless, they are closely interrelated, and when a particular problem is up for consideration these interrelationships may be overlooked and confusion of thought result.

"Expansion" and "Inflation"

One other definition is necessary. "Expansion" is a word that is used very loosely. Sometimes, though not always, it is employed as a synonym for "inflation." With these two words, or rather in contrast to them, are "contraction" and "deflation."

Any and every increase in the volume of circulating medium in the United States is not inflation. As population grows and as business activity increases a larger amount of circulating medium is needed if the price level is not to decline. If its amount should remain the same the price level would fall and we would suffer all of the accompanying hardships. As the volume of trade increases it is better to have an increase in the volume of circulating medium. If this occurs and at the same rate as the growth in trade there are no harmful effects, and it would not be correct to say there had been inflation. A mere increase in the volume of money or credit is not inflation, for the increase must be viewed in its relation to the demand for it. Similarly, a decrease is not to be referred to as deflation if it merely corresponds to a decline in the volume of business, *i.e.*, to a reduction in demand. The price level is not affected and no hardship results.

Changes in the volume of money and credit that only adjust their supply to the demand for them are better referred to as a contraction and an expansion that merely evidence the elasticity of a monetary and banking system. For years the Canadian bank note issues have increased in the fall of each year to meet the demand for crop-moving, and have later contracted when that demand ceased. Such changes ought not to be referred to as inflation and deflation, but as a most desirable expansion and contraction.

It is true that expansion of this kind might become dangerous, but it is not probable. The volume of note issues or of deposit liabilities in relation to reserves might become too large as compared with the reserve held for redemption purposes. Public knowledge of this situation might result in a run on the banks and the failure of some of them, even though the expansion had occurred merely to meet the needs of a rapidly growing trade. However, this kind of expansion is not apt to take place. There are both seasonal and cyclical fluctuations in the demand for money and credit, but in actual experience they are not likely to result in a condition of the sort just described. While an expansion does take place, ordinary trade demands are not apt to lower seriously the percentage of reserves held.

There are two periods of activity for analysis in this article. One extends from the formation of the Federal Reserve System in the autumn of 1914 to the spring of 1920. The second continues from that time to the present.

That in the first of these two periods there occurred an increase in the volume of circulating medium does not need to be argued here. Nor need we stop to demonstrate in detail that this increase was more rapid than the

growth in the volume of trade. Professor Kemmerer, in his volume *High Prices and Deflation*,[1] has shown that from 1913 to 1918 there was an increase of 13 per cent in the country's physical volume of business, while in 1919 it actually declined from the 1918 level being only 9.6 per cent greater than in 1913.

During this same period of time there was an increase in wholesale prices as reflected in the United States Bureau of Labor index number of 112 per cent over the 1913 level. Also, the exchange market showed a depreciation of the pound sterling, the mark, the franc, the lira and other foreign currencies in terms of our dollar. We have already pointed out that there are three kinds of depreciation, and the period in question may be examined with a view to determining whether the Federal Reserve System and its management were responsible for such depreciation as occurred.

First, let us notice the increase in the volume of the circulating medium. From November 1, 1913, to November 1, 1918, the amount of money in the United States increased from $3,755,994,000 to $7,590,173,000. Of this increase $1,173,883,000 was in gold (and gold certificates), and $2,660,296,000 in other forms of money. The increase in our stock of gold had a definite connection with affairs abroad, and will be considered a little later. But there was an increase in the issue of Federal Reserve notes, from nothing to $2,705,737,000, and in the Federal Reserve Bank notes from nothing to $71,647,260. Also during approximately the same period the deposit liabilities of the national banks increased from $6,051,689,000 to $11,013,330,000. There was without doubt an expansion in our circulating medium more rapid than in the demand for it. What was the occasion for this and where does responsibility rest?

[1] *See* pages 3–13.

INCREASED DEPOSIT LIABILITIES

There were three leading reasons. One is found in the very nature of the Federal Reserve System. Our national banking organization as it existed prior to 1914 was said to lack elasticity. Expansion to meet any seasonal or cyclical growth in trade needs was difficult to secure, as was also contraction when the need had passed. Explanation of this difficulty need not be presented here, as the reasons for it are fully understood by most students of the subject, and have been set forth many times.

Under the old law, country banks were required to maintain a reserve of 15 per cent of their deposit liabilities, of which two-fifths, or 6 per cent, had to be in actual cash in their own vaults; reserve city banks, 25 per cent, of which one-half had to be in cash; and central reserve city banks, 25 per cent in cash. The net effect was that there could be on the average about $8 of deposit liabilities on each $1 of reserves held by the national banks of the country, or an average cash reserve of 12½ per cent. This varied slightly from time to time, and there have been slight differences in the estimates of students of the question, but the figures are sufficiently accurate for our present purpose.

Under the Federal Reserve Act, particularly as amended, all this was changed. By a concentration of cash in the vaults of the twelve Reserve Banks each dollar could be utilized much more effectively. Accompanying this there was a reduction in the reserve requirements of the member banks, and the net result was that $1 of reserve furnished the basis for perhaps $11.50 of deposit liabilities, or an

average cash reserve of about 9 per cent.[2] Although there may be differences of opinion as to this particular figure, there can be no dispute over the fact of a very pronounced change in the direction indicated.

Whether a change of this kind, which permitted and even encouraged an expansion in deposit liabilities, was wise cannot here be argued, but will be assumed. The United States had been paying too dear a price for its banking system. Greater elasticity was important. It could not be secured except by a centralization of reserves, and centralization of reserves means that each dollar is more effective than before. Under such circumstances an average cash reserve for the country of more than say 10 per cent or 11 per cent would be very difficult and probably impossible to maintain. Such a change as this would have resulted under any plan of banking reform and under any management. Our circulating medium would have expanded more rapidly than the growth in trade demand and, *celeris paribus*, would have caused a rise in the general price level.

INCREASED GOLD RESERVE

This assumes no alteration in the volume of the gold reserve. A reduction in gold supply would have offset this tendency to expansion, while any increase would enhance it. On this point we need merely refer to the facts, which are that from August 1, 1914, to January 1, 1919, there was an importation (net) of gold into the United States amounting to $1,071,669,000, which made possible (according to the above ratio of $11\frac{1}{2}$ to 1) an addition of about $12,324,193,000 to the deposit liabilities of our banks.

It thus appears that a plan of banking reform was deliberately adopted by the country, after a discussion extending over a number of years, which was one that was sure to increase the deposit liabilities of our banks. Moreover, any other reform, such as the so-called Aldrich Plan, would have had a similar effect.

But can the Federal Reserve System or its management be held responsible for the importation of gold that furnished an additional basis for this expansion? There is certainly no reason for such a view. The intense demand for our commodities and the rapid growth in our export balance threw on the European belligerents the burden of righting in some manner their unfavorable position. Commodities and securities, particularly the latter, were hurried over to us, and especially in the earlier part of the struggle large amounts of gold were sent also. The movement was a part of the general situation, and would have occurred had we still been operating under the old National Bank Law.

In fact, the existence of the Federal Reserve organization facilitated rather than impeded credit transactions, and thus made it easier to check the gold movement. If the older system had still been in operation much more gold might conceivably have been imported into the United States during that period.

STRAIN OF FINANCING WAR PURCHASES

But the analysis is not complete. Admitting that the new reserve requirements and the importation of gold encouraged a considerable expansion, it may be argued that the expansion that really occurred was extreme, going so far that the percentage of

[2] "Mechanism of Expansion Under the Federal Reserve System"; *Monthly Review of Credit and Business Conditions in the Second Federal Reserve District*, September 1, 1921, p. 12.

reserve actually held by the system was for a long time very close to the legal limit. With the New York Reserve Bank this was particularly noticeable. While the situation was a very strained one for the System as a whole, the condition of the New York Bank was at times especially weak, and was even disguised, though rather poorly, by a change in the form of its weekly reports. Had this been presented in the same form as used by the other eleven banks and by the System as a whole, there would have been shown a smaller percentage of reserve than that prescribed by the law. The form of report adopted by the New York Bank may have been as good or even superior to the other form, but the difference referred to illustrates the strain on that bank. At one time, too, the situation was materially helped by the timely deposit by the Federal government of a considerable amount of silver with the New York Bank. Also, the twelve banks of the System gave each other extensive relief by rediscounting heavily for each other, a form of assistance that was of general aid, but was particularly valuable to the New York Bank after November, 1919.

There was clearly a considerable amount of strain on the System. As has just been pointed out, the altered reserve requirements would have made possible a very considerable expansion in deposits, and heavy importations of gold increased this tendency, but neither of these facts explains the strain just referred to.

In the period from 1914 to April, 1917, there was a very heavy demand upon American banks to assist in war financing. The United States was not yet in the conflict, but the vast movements of goods, chiefly to allied countries, called for a large amount of financing, and American banks, including the Federal Reserve Banks, assumed the burden.

The Federal Reserve System was designed primarily to aid commercial banking, that is, to assist in those banking transactions that facilitate the movement of goods from producer to consumer. To this general statement a few qualifications should be added by way of reference to such provisions as those regarding savings deposits and trust powers, but in general the statement is correct. When war supplies moved from the United States to Europe our banks gave their assistance. The volume was large but expansion was possible under the Federal Reserve System and with the increased gold supplies prevented any serious strain on the System prior to our entrance into the War and for a considerable time thereafter. Our participation in the conflict and the consequent demand for war financing by our own government definitely altered the situation.

Effect of Treasury Policies

Just what policies should have been followed by the Treasury Department in meeting the war emergency is something on which we probably cannot agree. The facts, however, are clear. The problem was one of securing maximum production and of diverting to war uses a very large fraction of that total product. Two main devices were employed to divert output to the government—taxation and bond issues (including certificates of indebtedness). Both of these were intended to secure the desired funds by encouraging saving. Taxation took funds from a taxpayer, usually much against his will, while he was expected to buy bonds voluntarily.

But the war needs amounted to some \$18,000,000,000 per annum, and at one period payments were as high

as $2,000,000,000 per month, or at the rate of $24,000,000,000 per year. Prior to the War our annual savings are estimated to have been at the rate of no more than $6,000,000,000 or $7,000,000,000 per year. To treble or more than treble the amount available was probably too great a task for taxation and bond issues combined. At any rate, policies were adopted that resulted in an inflation of the currency and hence forced loans from the general public.

RESERVE BANK FACILITIES FOR WAR FINANCING

If one is to appreciate the position of the Federal Reserve Banks in war financing, several facts must be kept in mind. One is the altered reserve requirements of member banks already referred to. Some of the reductions were made after we entered the War, particularly by the provision that the reserves specified were to be kept, not in the member bank's own vault, but as a deposit account with the Reserve Bank of its district. Along with this must be remembered the other amendment to the law that allowed gold in the hands of the Federal Reserve agent held by him against issues of Federal Reserve notes to be counted as part of the required reserve of his Federal Reserve Bank. Also, there must be mentioned the policy early adopted by the Reserve System of concentrating the gold and gold certificates of the country in the vaults of the Reserve Banks, Federal Reserve notes being issued in their place.

There were two other important provisions of the law. One of them states that the Reserve Banks are to be fiscal agents of the government. This places them in a position in which they are compelled to coöperate in methods of financing decided upon by the Treasury Department.

The other provision is one that appears to the casual reader as of slight significance, but it furnished the basis for many of the important operations of war financing. In Section 13 of the Federal Reserve Act the powers of the Reserve Banks are enumerated. Among the prohibitions there set forth is one against loans on "notes, drafts or bills covering merely investments, or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, *except bonds and notes of the Government of the United States.*

The exception in the last words of this quotation was not particularly significant at the time of the passage of the Act—in fact it was rather commonplace. Yet it became very important during the War. The Reserve Banks could and did lend on government bonds and notes as security.

To the large amount of latitude thus allowed additions were made from time to time through rulings made by the Federal Reserve Board. Thus it does not seem entirely clear to the layman whether the law permits a Reserve Bank to discount the direct obligation of a member bank. The writer was of the opinion that it did not, and that only the rediscounting of customers' paper was acceptable. That he was wrong is shown by the fact that this direct discounting was permitted on a very large scale. Member banks discounted their own notes accompanied by Liberty Bonds as collateral security.

Closely associated with this policy were the decisions that notes of this sort might run for as short a time as fifteen days, that they might be renewed somewhat freely as they matured, and that there should be charged for such loans a discount rate no higher than the interest rate paid by the government on the bond offered as collateral.

The provisions of the law as cited opened the way, and the decisions just mentioned let down the bars completely. What followed may be visualized if one's imagination permits him to assume two printing presses in the Treasury Department. On one of them were printed government bonds for sale to the public through the Reserve Banks, which were the fiscal agents of the government. The Reserve Banks delivered the bonds to member banks for actual sale. A customer who was besought to buy a bond protested that he had not the funds, but was informed that he need pay only a small amount at a time, his bank agreeing to advance a loan, retaining the bond as collateral security and charging only the same rate of interest as paid by the government on the bond.

This seemed generous and so aided the sale of bonds that the banks were in need of help to carry their part of the load. They were reassured by being told that they could give their own fifteen-day notes to their respective Reserve Banks, provided they would present with them as collateral these same Liberty Bonds that had been purchased by their customers, but which were not to be delivered until fully paid for. They were also assured of the same low interest rate and of an easy renewal of the notes as they fell due.

Imagine still further that this offer brought such general response from the banks that the Reserve Banks were overwhelmed and their officers hurriedly and urgently besought the Secretary of the Treasury for relief, because of their lack of funds. His answer, however, was reassuring. He merely pointed to the other printing press on which were being printed great quantities of Federal Reserve notes, which were furnished to the Federal Reserve Banks as needed.

Thus the Treasury on one press printed paper money (Federal Reserve notes) which it delivered to the twelve Federal Reserve Banks. They in turn gave them to their members in return for the notes of these banks secured by Liberty Bonds. The member banks were then able to pay the government for the bonds struck off on the other printing press.

The description may be fanciful, but only slightly so. In the good old days, say in the Civil War, the process was much more simple and direct. The government printed the United States notes—the greenbacks—and put them directly into circulation. The modern method is more complex and has its advantages, but in many of its features it is the same.

RESPONSIBILITY FOR INFLATION

As a result of the analysis we have been making, it seems clear that the Federal Reserve Board and the officials of the Federal Reserve Banks cannot be charged with responsibility for any "inflation" that occurred down to the summer or fall of 1919. It was due to (1) altered reserve requirements; (2) an influx of gold, and (3) the policies of war financing for which the Treasury Department was chiefly responsible.

Of the three kinds of depreciation mentioned at the beginning of this article two were evident. The American dollar had greatly appreciated in terms of the leading European currencies, so much so that various stabilizing devices were employed. Foreign currencies had depreciated in terms of our dollar. For this condition neither the government nor the Federal Reserve System was responsible. If we had been still operating under the old National Bank Act with all of its rigidity, the foreign exchange situation would have been no better and might have been worse. After a few

months of wild fluctuations foreign governments gained control of the exchanges by using "pegging" devices, an arrangement that would have been much harder to make if our banking system as a whole had been less well organized. After we entered the War responsibility for this control was largely taken over by our government, which of course used the Federal Reserve System as its fiscal agent. From the proceeds of Liberty Bond sales, advances were made to foreign governments, our Treasury Department receiving and holding their notes for the amounts involved.

There was also a depreciation of our own money, the dollar, in terms of commodities. Prices rose rapidly, but as we have noted this was due in the main to (1) the greater possibility of expansion that would have existed under any reorganization of our banking system; (2) the heavy importations of gold and (3) the fiscal policy of the Government.

The second form of depreciation did not occur; at least, there were no outward evidences of it. Our various forms of paper money at no time were depreciated in terms of gold. In case an open gold market had existed, the situation might have been different, and a premium on gold might have appeared, though probably not.

Post-Armistice Trends

But what can be said of conditions from the close of the War late in 1918 until the spring of 1920? During this period prices continued to rise, while the volume of Federal Reserve notes and of deposit liabilities rapidly expanded. Gold imports had ceased and in 1919 the movement was reversed, considerable amounts of gold leaving the country. The exchanges of many of the countries that had been neutral during the War (and even those of many of the minor belligerents) were against us, and, as restraints on the exportation of gold were gradually removed, the gold started out. The War was over, but prices still rose, while note issues and deposit liabilities kept increasing in spite of the fact that the gold reserve was being withdrawn. The percentage of reserves held by the Federal Reserve Banks declined until it was perilously close to the legal minimum.

In this period, what kinds of appreciation and depreciation occurred? At the end of 1918 a number of the exchanges were against us, but by the fall of 1920 all of the leading exchanges were in our favor, with the exception of Hongkong, Shanghai and Yokohama, and they were rapidly falling, especially the first two. Exchanges that had already been in our favor were becoming more so. The American dollar was appreciating in terms of nearly every other money in the world, or, to reverse it, those moneys were depreciating in terms of our dollar.

Commodities were clearly appreciating in terms of our own money, the evidence being the rise of the price level until well into 1920. Our money was depreciating in value in terms of commodities. There was also a tendency toward a depreciation of paper money (including bank deposits) in terms of gold. Reserves were declining and liabilities expanding with a resultant decline in the percentage of reserve held. Considerable uncertainty and doubt appeared, but there was no actual premium on gold recorded. There was merely a tendency that operated as a distinct warning and that called for corrective action.

The movement was therefore a mixed one. Our dollar was appreciating in terms of foreign money, but was depreciating in terms of com-

modities, while our paper money and our bank deposits were being placed in a more and more precarious position with reference to our standard money—gold. The exportation of gold was helping to appreciate our dollar in terms of foreign currencies, but was imperilling the gold standard at home by weakening our gold reserves while bank liabilities were mounting.

CONDITIONS HINDERING RESERVE OFFICIALS

In fairness to the Federal Reserve officials, several facts should be pointed out. First of all war financing was by no means over. The Victory notes were issued in June, 1919, followed from time to time by large blocks of certificates of indebtedness. The actual fighting of the War was over, but the fiscal operations were not. As fiscal agents for the government the Reserve Banks could not immediately free themselves from the responsibilities that have already been described.

Next it should be remembered that what occurred in the United States was in part paralleled in other countries. Prices were rising in England, France, Italy, Sweden and elsewhere, much more rapidly than in the United States. It is true that many of these countries were more seriously affected by the War than we were, but it is not unfair to urge that many of the same influences that were operating abroad were also affecting us. Complete dissociation from so world-wide a movement could not reasonably have been expected. The upward movement which had lifted prices prior to the signing of the Armistice was not exhausted, and the rise continued. Just as military activities were in evidence for a long time, so the economic forces set loose between 1914 and 1918 could not suddenly be reversed.

But this crude analogy between military and economic facts is apt to be very misleading. A more satisfactory explanation is to be found in the fact that the Federal Reserve System was (and for that matter still is) in the first phase of its development. Some of its most important features are not yet fully understood even by many bank officials. Several years after the organization of the Reserve Banks a prominent banker who was serving as director of one of the twelve institutions was said to be unable to grasp some of the fundamentals of the law, and even today a thorough comprehension of some of its leading features is by no means common.

One of the misconceptions that has persisted is the idea that the System is to be merely a source of relief in times of difficulty. That assistance through rediscounting is needed in times of seasonal and cyclical strain is easily understood, but that the Reserve Banks should at all times exercise a supervision over the banking system and often impose its control is not fully realized. Even when the possibility of this control is understood the result is often intense resentment at what seems to be unwarranted interference.

Such control is, however, the usual thing abroad, and the Federal Reserve Act has in it numerous provisions which give a similar power to our system. But legislative authorization is not in itself adequate. The Federal Reserve Board and the officials of the twelve Reserve Banks cannot move too far ahead of public opinion, especially banking opinion, nor can they go too violently in opposition to it. Perhaps the most important single device by which the Reserve Banks can control the money market is the rediscount rate, but the mere statement of that fact does not mean that

they can freely employ this device. An important measure of public support is necessary in case such a power is actually to be used.

Why the Discount Rate Was Not Raised

It has been argued that at the close of active hostilities the Reserve Banks should have exercised this power by rapidly raising their rediscount rates until they were above the rates charged by member banks to their customers. There would then have been no gain to the member banks in rediscounting; they would have curtailed accommodations to their customers and inflation would have quickly been checked. The Bank of England thus controls the money market of England. Why could not our Reserve Banks do the same? What reply can be made to this argument?

Two observations may be made. First of all, the British method has been employed for many years, and the banking community of England is accustomed to it, accepting it as a matter of course. Our Reserve System was authorized in 1913 and not organized until 1914, several months after the Great War had started.

Next, it is to be remembered that from 1914 to 1918, and especially during 1917 and 1918, the fiscal policy of our government made it impossible to initiate such a policy of control. A rediscount rate higher than the market rate, or, at least, one higher than the rate of interest on Liberty Bonds, would have made impossible the methods of financing that were employed.

From 1914 to April, 1917, the Federal Reserve Bank of New York did succeed in keeping its discount rate above that for commercial paper, thus adhering to the policy of the leading foreign banks. With the entrance of the United States into the War, conditions changed. During 1917 and 1918 the minimum discount rate of the Bank of England was (as is regularly true in England) considerably higher than the market rate on ninety-day bills in London, but during this period the discount rate of the New York Federal Reserve Bank for commercial paper was regularly lower than the prevailing market rate in New York for the same kind of paper. If control of the market had been the only purpose to be kept in mind during this period, it would have been wise to have raised the discount rates of the Reserve Banks more rapidly than market rates rose, and thus have established control.

Armistice Day found the Reserve Banks still not in control of the situation, and able to influence it only to a minor degree by a scrutiny of particular paper presented for discount or by oversight of the rediscounting done by particular member banks. A Victory Loan had to be floated, and other post-war financing was necessary. Moreover, member banks had discounted large amounts of their own obligations at the Reserve Banks with Liberty bonds as security. On November 15, 1918, the total volume of bills discounted with the Reserve Banks secured by government war obligations was $1,358,416,000, and on February 27, 1920, it was $1,572,980,000.

Difficulties were accordingly very numerous. To place restraints upon the expansion from 1918 to 1920 would have been difficult, and, even if practicable and desirable, would have called for a very high degree of wisdom and courage. It is the opinion of the writer that our government was very unwise in its decision to float its war issues of bonds and certificates of indebtedness at such low rates of interest. When so large an amount of saving was needed much higher rates would

have been better. The low rates actually offered kept the general security market quiet for a considerable time, but such a policy inevitably meant a rise in prices that injured the general public, including holders of securities, far more than would the offer of higher rates on the new government issues. Nevertheless, the policy was adopted, rates were kept down and the Reserve Banks were and still are the fiscal agents of the government. So long as they are fiscal agents the way in which they perform their other functions must be affected by this relationship.

THE NECESSITY FOR HIGHER DISCOUNT RATES

By the spring of 1920 conditions had somewhat altered. The larger part of war and post-war financing had been completed, and the responsibilities of the Reserve Banks to the government were somewhat lessened. A large volume of rediscounts was still in the possession of the Reserve Banks, but more freedom of movement than before was possible. Accordingly, their policy was altered.

It was clearly time. A very strong case could have been developed for earlier action, but certainly longer delay would have been unwise. Prices were still rising, discounts with the Reserve Banks were increasing and their deposits and their issues of Federal Reserve notes were mounting with leaps and bounds. The percentage of reserves held was near the legal minimum. All banking experience indicated that danger was ahead. Speculation was rampant, and was sure to be followed by a reaction whose seriousness would be proportionate to the delay in its appearance.

There were several special reasons for concern. Our own spring demand for money was at hand, to be followed the next fall by the usual fall demands for crop-moving purposes. Also the situation in Europe was most disquieting. Monetary systems there were developing alarming tendencies. Prices were rising, bank liabilities expanding and reserves declining far more than in the United States. If a general collapse had occurred we would have been unable to meet it without a general breakdown of our entire business and financial structure. We were already strained almost to the breaking point.

Under such circumstances it was not possible to rely on the judgment of American business men to impose checks of their own. A few began to contract their operations, but the larger number went on piling up their own liabilities at the banks and extending credits abroad and at home with little or no appreciation of the unsound condition. Early in 1920 the rates were raised. It was none too soon. First in Japan and later in other countries the reaction came and prices began to crumble.

In the face of this collapse credits were extended by member banks to customers, often unwisely, but on the whole with a view to easing business through the trying period of the crisis and the subsequent depression. In turn the Reserve Banks gave assistance to member banks at the new and higher rates, but with a very considerable freedom. After a few months deposits and note issues began to decline and reserve percentages to rise, until a condition of comparative banking security was attained.

It was, however, a trying experience. Those who suffered from the fall in prices resented bitterly the new policy that seemed to them responsible for their losses. The sufferers as separate individuals were not, in most cases, to blame. They were merely a part

of a cumbersome and faulty business organization in which periods of excessive expansion and contraction are a frequent and somewhat regular occurrence. In many individual cases injustice was doubtless done borrowers, but on the whole our constructive criticism should be directed at an economic organization that makes such an outcome possible.

Caution Still Imperative

Nor is the danger by any means over. The period ending in 1920 was one in which money was depreciating rapidly in terms of commodities, and our deposits and paper money in danger of depreciating in terms of gold, as they have actually done in many other countries. The danger in these directions has for the present at least disappeared. But the very policy of higher discount rates which aided in giving this relief brought with it certain unfortunate consequences. To-day the currency of nearly every foreign country is at a heavy discount in New York. Gold was for a time being exported from the United States, but from January 1 to November 1, 1921, the net importations of gold have been about $564,000,000, and the gold holdings of the Reserve Banks have increased by about $666,000,000.

This influx of gold, together with a decrease in deposit and note issue liabilities, has increased the percentage of reserves held, and relieved us from one serious danger—that of a reserve deficit. But we are at once faced with another. As reserve ratios rise borrowers cannot understand restraints on borrowing. Depreciated exchanges carry no warning to most of us. Foreign government budgets that fail to balance and the imminence of defaults and perhaps repudiations cause little alarm. A default by Germany in her next reparation payment, now almost due, seems at this writing almost certain. If it occurs, the effects on French finances and business, and through France on all Europe, will be almost incalculable in their gravity.

It is a time for the exercise of the greatest caution. No matter what policy we adopt, hardships will result. Our choice is merely between evils, and no matter what our decision the path ahead is by no means bright. Higher discount rates in the face of the depreciated exchanges means still heavier gold imports. Withdrawal of gold from foreign countries weakens them still more, and adds to our stock of gold that is already disproportionately large.

On the other hand, low interest rates encourage an expansion which ought for our own sakes to be held in check. High bank reserves are by no means a sufficient excuse for a generous loan policy at the present time. A combination of low rates with a careful limitation of loans is the ideal, but very difficult of attainment.

Since default by Germany seems so imminent the sooner it is faced the better, even if it is disguised as a moratorium. After it comes there will be a more general appreciation of what is ahead, and plans can be more effectively made for real recovery. One of our present dangers is the possibility of developing an unhealthy optimism that will lead to a business expansion, too rapid and in wrong directions. If it occurs, the reaction will be worse than a prolongation of the present depression. Gradual recovery is trying, but will be far better.

Then, too, we may hope that during the period of readjustment our Federal Reserve Bank will be able to secure control of the money rate. Such a control will be no panacea, but it will be an important aid in bringing more stability in our monetary and banking system.

Expansion and Contraction as Seen by a Business Man

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EXPANSION and contraction in volume of business and in credits have always existed in modern times. Human nature is such and conditions of production and consumption are such that there can be no dead level. Unfortunately, these tendencies nearly always run to extremes, so that we usually have, about once in so often, periods of over-expansion, and, as a consequence, we get over-contraction. Many bankers will admit the existence of the first of these extremes, but they are not so ready to admit the second. It seems to me that both are very real, and that in many cases both of these extremes can be prevented.

As the process of expansion is going on, each business sees most clearly the part that applies to its own experience, while the rest of the process is often either unseen or obscure. A business man, either in manufacturing or distributing, comes in contact with the processes of expansion, from the beginning to the end, from the time when the contract is first made to the end when credit is made for financing and the credit given in selling. Over-expansion is pretty sure to occur whenever such contract is made for a larger quantity than a normal amount used by the business concern, or when it runs through a longer period of time in the future than is ordinarily contracted for by the company, or when the contract is made for a price considerably in excess of the cost of production.

The first step in this expansion is caused, as a rule, by the state of mind of the buyer, who thinks he sees a much larger business ahead than the company has ever had before, or who believes that goods are going to be very scarce, as when the war purchases were being made, and that prices are going higher. It is this thought that produces his act of expansion. This thought and this act are often contagious, so that other people take up the idea and a feverish state of mind, like an epidemic, sets in among all buyers, which results in large purchases for delivery running over a long period of time.

HOW BANKERS COULD CHECK OVER-EXPANSION

In the distributing business, for instance, such buying requires at the start very little credit, and necessitates hardly any simultaneous credit expansion. The wholesaler might place an order for one thousand cases of cotton goods to be delivered during six months, beginning three to six months after date of purchase, the seller being sold up until that time. All that the manufacturer has to do is to cover his cotton on the cotton exchange and put up a margin for so doing. The wholesaler puts up no money at all and no credit. In fact, no credit would be required from the banks for, say, sixty to ninety days, when the first shipment of cotton is to be paid for, and no bank credit asked for by the distributer or wholesaler for perhaps six months, when the bill of the first delivery becomes due.

It is obvious, therefore, that while the business man sees expansion both at time of making the contract and at the time when he asks for credit to pay his bill, the banker would know nothing, except in a general way, of the great mass of purchases so made until some time after the contracts were signed, and perhaps not until the bills came due. Bankers are well posted

in a general way only as to what their customers are doing or expect to do. In my judgment, they should always find out from their customers not only what their stock on hand is at a given time, but also what their commitments or advance purchases are, as these commitments are often the source of as great a loss in the case of a falling market as is stock on hand. If bankers asked these questions continually, especially at the period of requiring statements from their customers, they would be in a better position to check over-expansion at the start, by either discouraging purchases or refusing to give the necessary credit or raising the rate of interest charged.

If, in turn, the Federal Reserve Banks were kept in close touch with all these movements through the leading banks and merchants, as is now being done in many centers, this frenzied state of mind could be cooled off, and large contracts for future high prices prevented. The disease would be stopped before it became an epidemic. It is for this reason that it seems to a business man that rates of the Federal Reserve System should be raised just as soon as bankers see this situation of expanding contracts coming on, not when the bill comes due and the customer asks for credit to pay for it. At that time, the banker can do only one of three things: First, grant the credit; second, advise the customer to repudiate the contract, which he would do under the circumstances, and third, let him squirm out as best he can, no matter what the loss. The last course would probably cause many failures.

Fear Checks Over-Expansion

Over-expansion can be prevented only by arousing in the mind of the buyer a fear that if he makes an excessive contract at high prices, he will get into trouble. He has been led to think in a general way that under the Federal Reserve System his bank would always look after him and there could be no trouble. Many told him if a decline in prices did occur, it would come gradually, even though all history tells us that over-expansion breaks suddenly and prices come down sharply. Even with prices raised to three or four times above normal, it was often felt that no merchandising difficulties could arise, for do we not have the Federal Reserve Banks?

Under the old system, before the Federal Reserve Act was passed, every bank had to depend to a great extent on its own resources, and to live or die according to the distance it got from shore in a storm. This restricted the banker's available credit and lessened the merchant's confidence in getting help. Both banker and business man had a very well defined fear of over-expanding.

While the Great War was on, and even after the Federal Reserve Act was passed, no merchant felt like buying a large amount of goods at high prices for long-time future delivery, as no one could tell when it would be over. When it was started, some thought it would last ninety days, some thought it would last one year, and some two or three years, but it was all uncertain, and bankers and merchants stayed pretty close to shore. They were assisted in not buying at high prices by the action of the government in arranging price fixing bureaus.

When the War did end, there were no large contracts outstanding at high prices and it took only three or four months to make the proper re-adjustments. After that, however, merchants and bankers lost not only all the fear which they had had before the Federal Reserve Act was passed, and which formerly produced panics, but also all the fear which existed while the War was on.

Need of a Progressive Rediscount Rate

As this fear is very necessary to both banker and business man, I am much in favor of the progressive rate of rediscount, so that those who have the disposition to offend will know in advance that they will be heavily penalized. As the phrase goes, that clause "puts teeth in the law" and the one who first over-expands should be bitten first. A level rate puts all in advance in the same category and does not stop over-expansion at the particular source where it has started. Another reason why the progressive rate law should never be repealed is that in many districts in the United States 8 per cent is the normal rate, and 10 per cent not uncommon. Instead of there being a penalty in charging such banks 7 per cent there is a constant inducement left for them to expand. Federal Reserve Banks must have a sliding scale of rates to meet such common conditions.

As this over-expansion did not occur in the case of all banks and in all districts, but with only a certain percentage of the banks in every district, and as some large banks in big districts were just as bad offenders as the small banks in country places, it seems to me obvious that such a law is not only wise but necessary, in order to prevent over-expansion at the real source whenever it may crop out.

Interest Rates Only One Check on Over-Expansion

Perhaps I have laid too much stress on the efficiency of the rate of interest to stop over-expansion. It is only one of the remedies. Bankers themselves will have many instances where they will have to curb banks and merchants who are willing to pay high rates, if only they are allowed to continue in their mad careers. Federal Reserve Banks, more than ever before, will have to hold a tighter rein to stop such careers by flatly refusing to make loans and especially by stating beforehand that they will so act. Only such advance information, inspiring the proper fear, will prevent the first acts of over-expansion, which, if allowed, bring all others in their train with all the consequent disasters.

The solution is in the hands of the banker. If he will get at the facts and use his strategic position in granting or refusing loans and regulating rates of interest, he could check this over-expansion before it becomes dangerous. In saying this, I do not mean that the banker is as responsible as the business man in starting over-expansion, for the business man is the one who acts first. However, the banker often has a broader view of general conditions, not only in this country, but all over the world, and can, therefore, see the general trend of things earlier. It is for this reason that I have at other times contended that the various Federal Reserve Banks should have raised their rate sharply in November and December, 1919, when the large buying movement at high prices began. Instead of doing that, rates then were as low as 4½ per cent for rediscount with the Federal Reserve Banks. This was almost an invitation to buy heavily and certainly would lead an ordinary business man to assume there would be nothing wrong with the credit situation in the near future.

Prevention of Inventory Shrinkage

The second important process in general expansion takes place when the various business concerns find their excessive bills coming due and are obliged to resort to banks for large loans. As these goods have been

bought in large quantities at high prices, it takes from two to three times a normal loan to carry a given amount of actual merchandise. This is repeated many times all over the country and all down the line through the different processes of manufacturing. The deposits and loans go up and discounts at the Federal Reserve Banks increase. While this paper so discounted is, in one sense, self-liquidating, as the term goes, that is only true insofar as the prices at which goods are bought can be maintained.

If prices go down half rather sharply, as they did in the fall of 1920, it is only one-half self-liquidating, and if the quantities bought at the high prices are far above normal, it may only be one-fourth self-liquidating, because the concern which bought the goods has no normal channels through which the merchandise can be sold. This brings upon the market so-called "distressed merchandise" which is sold regardless of cost or competition, and aggravates still further an already disastrous situation. It is for this reason that the banker should be somewhat familiar with the prices at which goods are bought, as compared with normal prices, before he encourages a merchant to buy, or before he gets the whole economic structure, including Federal Reserve rediscounts, built up on the basis of high prices.

The Federal Reserve Banks have, in my opinion, been very unjustly criticised for raising rates above six per cent, as though the raising of the rates in the spring of 1920 caused all the trouble. My only criticism is that they did not raise them early enough and before all the harm was done by the making of the vast amount of long-term contracts at the highest prices since the Civil War. They had to act some time, and it was better late than never. The inverted pyramid would have toppled over any way, but less damage would have been done by the fall if the base, which was up in the air, had not been allowed to grow so large.

Prevention of Over-Contraction

While nearly every one admits that over-expansion can be checked, all do not agree that over-contraction can be prevented. Many bankers have told me that we must have a thorough liquidation, which means, in the last analysis, that prices must go below cost of production, mills close up, business stop, much of the circulation of credit and merchandise cease, until this thorough liquidation has run its course. Before the days of doctors and the use of remedial measures, it was undoubtedly thought that all epidemics would have to run their course, that nothing could be done but let the people die. In other words, we must have a thorough "liquidation" and death of people. It is well known that a proper mental condition of the patient is often just as necessary as some stimulus to help out the heart action. So in business affairs, proper mental attitude and some assistance from banks and business men generally is necessary to prevent contraction's going the limit. I think that there are often times when it is evident that contraction has about reached the end, and when the mercantile speculation fever at least has gone. At that time interest rates should be reduced before the irreducible minimum has arrived and some inducement made for people to go ahead and do business, so as to bring about a movement of merchandise and a better employment of the great army of unemployed, which always increases greatly during an aftermath of extreme contraction.

The War Finance Corporation has stepped in and done some of this work

during the last nine months with great judgment and success. It is extremely fortunate that we had some such organization to prevent the so-called complete and disorderly liquidation, which some interests seemed to think absolutely essential to better times.

EDUCATION THE REMEDY FOR OVER-EXPANSION AND OVER-CONTRACTION

It is evident that the banker and the business man are in a sense trustees of the prosperity of the nation, in that their combined acts, if unchecked, may bring about hard times and unemployment to thousands of men who have no power of decision in starting a movement which will result so disastrously. I say they have no decision in making the start, although, after it is about half way along, the wage earners have much to say when they begin to buy heavily, and, feeling higher and rising cost of living, begin to demand more pay, which, in turn, adds to the price of the manufactured articles.

On the other hand, in times of over-contraction, the business man and the banker have often lost their power of direction and voluntary decision. They are controlled almost entirely by the general populace, which refuses to buy, and by the wage earner, who will not consent to a reduction of his wages commensurate with the changed cost of living and the new world conditions brought about by the collapse of the boom. It seems to me, therefore, that education is needed on both sides, first to prevent expansion from becoming *over*-expansion and contraction from becoming *over*-contraction. Sound common sense and experience will finally be the teachers if expert economists are not.

Currency Expansion and Contraction

By JAMES B. FORGAN
Chairman of the Board, The First National Bank of Chicago

AS is well known, the Federal Reserve System is the result of the financial panic of 1907. At least, it was this financial crisis that hastened the establishment of a more rational system of issuing currency than had previously prevailed in the United States. To be sure, there had been earlier movements to make possible an automatic expansion and contraction of our currency. As far back as 1902, and probably earlier, there are to be found discussions in regard to our currency at every convention of the American Bankers Association. Long before the Federal Reserve Act was thought of, it was clear to any thinking banker that our whole currency system needed a thorough revision. In 1902 Charles N. Fowler, Charles G. Dawes and Horace White made addresses dealing with the currency problem at the convention of the American Bankers Association. The chief difference of opinion in that day was between the advocates of a highly taxed emergency currency and those of a low taxed credit currency, or, as General Dawes spoke of it, "a system of asset currency subject only to a nominal tax." As a result of this agitation, there was appointed at that meeting, held in New Orleans, a special Currency Committee, a forerunner of the Currency Commission which still exists. The Currency Committee ap-

pointed in 1902 made a report at the meeting of the American Bankers Association held in San Francisco in 1903, in which it favored an emergency circulation subject to a heavy tax, which, it was hoped, would insure the redemption of this currency as soon as the emergency which had called it forth had passed. Discussions continued until the agitation finally led to the appointment by the Association at its convention in St. Louis, October 16–9, 1906, of the present Currency Commission, of which Mr. A. B. Hepburn of New York has been Chairman and the writer of this article, Vice-Chairman, ever since its creation. Its first report appears (pages 100 and following) in the Appendix of the Proceedings of the Thirty-Third Annual Convention of the American Bankers Association, held at Atlantic City, September 24–7, 1907. Practically everything that now appears in the Federal Reserve Act was foreshadowed in the discussions of this Commission.

Lesson of Money Panic of 1907

Probably these discussions would have continued to be haphazard and without practical result had it not been for the financial panic of 1907. There is no need to go into the history of this panic in this article. Its interest to us is due to the fact that it made clear to the public at large what had long been known to experienced bankers, that the country was liable at any moment to suffer all the evils of business depression, not because of any inherent difficulties in the business situation but owing solely to the faulty mechanism which prevented the expansion and contraction of the circulating media in accordance with momentary requirements. The panic of 1907 was due simply to the fact that the government was unable to issue a sufficiently large amount of paper money to tide over a temporary situation, and, owing to this inability, a number of banks failed, and perfectly solvent corporations and business firms found themselves in financial difficulties without in the least being guilty of any commercial sins of commission or omission. The situation had to be tided over by extra legal methods, such as the issuance by clearing houses of certificates which really took the place of ordinary currency and were, therefore, a direct violation of the provisions of the Federal Constitution. A recent writer has summarized the condition as follows:

> The chief defect of the old national banking system was its decentralization resulting in scattered bank reserves. Even though the national banks of the United States possessed enormous aggregate cash reserves yet, before the establishment of the Federal Reserve System, those reserves were ineffective. There was no method of mobilizing cash for use where and when it was needed. No responsible body was empowered to adopt or carry out discount or other policies to avoid a financial panic or to handle a panic when it occurred. Other countries had economic crises; the United States not only had crises but financial panics as well. This is the reason that under the national banking system the United States was called "an international financial nuisance."[1]

As a result of the experiences of 1907, public opinion compelled Congress to take some action, and it appointed the National Monetary Commission. Thereafter, the Currency Commission of the American Bankers Association acted largely in an advisory capacity to the governmental body with which it held frequent conferences in Washington. Out of this grew, first, the Aldrich-Vreeland Act, and, later on, the Federal Reserve Act.

[1] Persons, "Basis for Credit Expansion." Harvard Committee on Economic Research. Vol. II, p. 21.

CURRENCY FUNCTION OF RESERVE SYSTEM

The Federal Reserve Act, in the first instance, is designed not so much for the purpose of compelling banks to keep certain fixed reserves and the like, as, primarily, to meet the changing requirements for currency, a function which the large central banks of Europe have performed for their respective countries for many decades. It is difficult to see how we could have weathered the storm of the War and the years immediately following without some such arrangement as that provided by the Federal Reserve System. It is a well known fact that the banks have been and are carrying many industries which would have been forced to the wall, injuring our whole credit structure, had it not been for the fact that the banks in turn have been able to obtain needed currency from the Federal Reserve Banks by rediscounting notes. Since banks are compelled to meet the demands made upon them by payment of currency over their counters, they would otherwise have reached the end of their resources almost immediately, owing to the tremendous expansion of business caused by the War. They would, therefore, in order to meet their own liabilities, have been compelled to call upon business houses to pay off their loans and, if necessary, would have had to demand the liquidation of perfectly solvent business enterprises in order to obtain the needed repayment. The banks, fortunately for our whole country, have not needed to resort to such extreme measures, owing to the rediscount privileges inaugurated by the Federal Reserve System, with which rediscount privileges our currency system is closely connected.

The Federal Reserve Act provides that any Federal Reserve Bank may issue Federal Reserve notes based on collateral security consisting of notes, drafts, bills of exchange or acceptances acquired either by purchase in the open market or through the rediscount privileges exercised by its member banks. The Bank is compelled, in addition, to maintain reserves of gold of not less than forty per centum against its Federal Reserve notes in actual circulation. This gold reserve held against Federal Reserve notes may fall below forty per centum, in which case "the Federal Reserve Board shall establish a graduated tax of not more than one per centum per annum upon such deficiency until the reserves fall to thirty-two and one-half per centum, and when said reserve falls below thirty-two and one-half per centum, a tax at the rate increasingly of not less than one and one-half per centum per annum upon each two and one-half per centum or fraction thereof that such reserve falls below thirty-two and one-half per centum."[2]

It is interesting to note that practice has shown that this check provided by the Act has proved to be entirely sufficient under the most exacting and trying conditions. Though there have been times within the last few years when the net reserve of gold against Federal Reserve notes outstanding was dangerously close to the legal minimum required, the ratio never actually fell below forty per centum.

It is under these provisions that the so-called expansion and contraction of our currency has taken place and is taking place. The total circulation of currency of all kinds in the country on September 1, 1921, was \$4,672,030,221, of which more than one-half was represented by Federal Reserve notes. While at the beginning of this year the total circulation of all currency amounted to \$5,500,702,153, the

[2] Federal Reserve Act. Sec. 11 (c).

changes were almost entirely in the item of Federal Reserve notes, since the rest of the currency is more or less constant.

Currency Inflation and Deflation

Before going further into this question of expansion and contraction of our currency, it is necessary to distinguish sharply between currency expansion and currency inflation. A recent article defines these terms as follows:

Currency expansion is the absolute increase in currency of various forms—chiefly gold, silver, bank notes, government notes, and deposits subject to check. Its opposite is *contraction* of the currency. *Currency inflation*, on the other hand, is relative, that is to say, an expansion of currency *out of proportion* to the increase in the absolute quantities of goods and services exchanged, due allowance being made for variations in offsets of book credits, in the "rapidity of circulation" of currency, and in the frequency with which goods and services are exchanged. The reverse is currency *deflation*—a decline in currency relative to the amount of goods and services exchanged. Currency inflation rarely takes place in exact proportion to currency expansion, or deflation in proportion to contraction, since changes in quantities of goods and services exchanged are constantly taking place. For the same or other causes, the equivalent of currency inflation or deflation, or, one might say, *effective* currency inflation or deflation, may take place without corresponding changes in the quantity of currency. So, after the Civil War, deflation in the United States was accomplished in the main, by "growing up to the currency" rather than by contraction. On the other hand, changes in the currency requirements ordinarily take place slowly; consequently, a marked expansion of currency usually involves currency inflation; and deflation is usually accomplished but slowly if it is unaccompanied by contraction of the currency.[3]

[3] Davis, "World Currency Expansion." Harvard Committee on Economic Research. Vol. II, p. 8.

From this it is evident that under the Federal Reserve Act we have had almost no experience in expansion and contraction, though more than enough in inflation and, at present, in deflation. In other words, the establishment of the Federal Reserve System was followed almost immediately by the crisis brought on by the European War, which, owing to governmental needs, brought about an inflation of the currency entirely out of proportion to the ordinary normal business requirements. Likewise, the reaction that has taken place since last year is a process of deflation, again out of all proportion to what is to be expected under normal and regular business conditions. One thing, however, has been proved, and that is that the raising and lowering of the rediscount rates by the Federal Reserve Banks influences very greatly the lending of money by the banks. The question may be raised whether this is not due more to the pressure of the example set by the Federal Reserve Banks than to the mere change of a relatively small percentage in the rediscount rate. But be that as it may, the banks in the country have followed the lead of the Federal Reserve System. Possibly it would have been well if the raising of the rediscount rates after the Armistice had taken place earlier. It is an open secret that the members of the Federal Reserve Board, as well as of the Federal Advisory Council, advocated such a policy long before it was put into effect. The needs of the government, however, intervened, and the necessity for the Treasury to complete its wartime funding operations superseded the dictates of a sound economic policy. Likewise, the successive lowering of the rediscount rate may be due more to the exigencies of politics than of sound banking practice. A recent

pamphlet issued by the Chase National Bank of New York has presented many effective arguments which tend to show that the rediscount rates ought to be determined by the prevailing commercial paper rate, rather than by other considerations.

The peak of Federal Reserve notes in actual circulation was reached on October 22, 1920, at which time these amounted to $3,356,199,000. These notes were first issued in November, 1914, but in the beginning increased very slowly. Even as late as July 1, 1917, the total of Federal Reserve notes outstanding was only $544,412,775. By July 1, 1918, the amount had, however, more than trebled, amounting at that time to $1,713,074,255. At the time of the Armistice, the amount had increased to $2,562,517,000, and on September 21, of this year, the amount in circulation was still $2,474,676,000, a reduction, however, of nearly one billion dollars from the highest point. It is to be hoped that this reduction will continue until we reach a point which may be regarded as meeting the normal requirements of business. Until now, banks of the country have acted in a patriotic manner and have generally forced liquidation. It may be feared, however, that such an unselfish policy will not be continued indefinitely if the Federal Reserve Banks, by keeping the rediscount rate below the ordinary commercial rate, make it profitable for their member banks to lend as much as possible. We therefore face the danger of a period of renewed inflation which must not be confounded with normal expansion as defined above.

Currency Expansion and Contraction

As already indicated, the real function of the Federal Reserve System is to make possible the expansion and contraction of the currency, demanded by the continuing changes in business conditions. As the country becomes more densely settled and industrial development continues, there will be need for a gradual permanent expansion of currency which will be met partly by increase in actual metal, but largely by the increase in other forms of currency. Beside such permanent increase, there will be the seasonal expansion and contraction which appears in the statistics of the central banks of all the larger countries. These seasonal changes do not coincide in the various countries. In countries with little agriculture, which are, therefore, compelled to import most of their raw materials, the time of largest expansion is apt to fall at a different time of the year from that in countries which are solely or very largely agricultural. We are in a transition period and what is true today may not be true a few decades hence. At present, however, our period of largest expansion is likely to be at crop-moving time, with contraction taking place after the operations connected with the movement of the crops have been completed.

Probably for the present, the experiences of Canada are most likely to furnish us an example. Canada's banking system is centered in a group of so-called chartered banks, of which there were twenty-four in 1914 and only eighteen in 1920. These banks have over four thousand branches throughout the Dominion, providing for its commercial needs and, in addition, serving as the chief savings institutions of the country. They are subject to comparatively little governmental supervision, although the Canadian Bankers' Association is a public institution whose secretary-treasurer has supervisory power over note issues. The banks are required to

make a monthly report of their condition to the minister of finance.

Canada's currency consists for the most part of bank notes. The banks are authorized by law to issue notes up to the amount of their paid-up unimpaired capital plus any amount they may have on deposit in the central gold reserve. In addition to that, during the crop-moving season they are permitted to issue additional notes up to 15 per cent of their capital and surplus combined, but this additional circulation bears interest at 5 per cent. The privilege of issuing additional circulation may be extended to cover the entire year, and, as a matter of fact, has been so extended during recent years. The chartered banks are not required to carry any special reserves against their circulation, except that they must deposit with the minister of finance, gold or Dominion notes up to 5 per cent of their average circulation. These deposits constitute the bank-note redemption fund. The principal security against circulation, however, is found in the fact that the notes are a first lien on the banks' total assets and in the further fact that the stockholders are subject to double liability on the notes. Bank notes are legal tender throughout the Dominion. It is to the interest of each bank to maintain as high a circulation of its own notes as the law permits. Each bank will, therefore, pay its customers over its counter only notes issued by itself. When the community's need for circulation contracts, notes will be deposited in the banks and the banks will return to the issuing banks the notes in their possession, and thus reduce the outstanding volume of circulation. In other words, since the notes are obtainable from any bank on demand and on the other hand can always be deposited with the banks as soon as they are not needed, the circulation in the hands of the public does not exceed the requirements of trade and industry.[4]

The Canadian statistics for the years immediately preceding the War and those since the War are given in next column.

[4] *Federal Reserve Bulletin*. December 1919. p. 1142.

CIRCULATION OF BANK NOTES IN CANADA

	1911	1912	1913	1919	1920	1921
January	77,110,971	88,065,521	94,575,644	226,385,506	237,269,805	229,608,213
February	79,927,785	88,920,598	97,206,713	210,894,809	223,979,666	211,640,296
March	81,938,753	93,819,333	102,202,047	216,529,576	231,220,770	215,931,035
April	83,647,088	95,145,371	98,100,111	223,763,426	243,226,193	216,262,907
May	81,862,218	93,819,333	102,997,936	219,287,788	235,085,179	207,359,887
June	88,618,699	102,011,848	105,697,629	222,712,991	238,088,555	207,056,687
July	89,018,079	95,827,534	99,143,411	223,662,648	240,833,686	203,134,777
August	90,630,530	101,501,270	105,806,914	223,454,556	237,697,647	197,461,372
September	97,197,176	104,334,287	111,075,519	229,532,356	242,988,866	....
October	105,855,021	110,696,877	118,234,359	242,509,573	252,882,760	....
November	101,943,056	115,473,098	119,497,321	248,073,385	253,576,534	....
December	102,037,305	110,048,357	108,646,425	247,611,079	246,859,667	....

It will be noticed that the circulation increases very largely in the last months of each year and decreases at the beginning of the year. This has been true even since the War, in spite of the fact that Canada has had a period of inflation similar to our own. It is also interesting to note in this table that naturally there has been a very large increase of bank notes since the War, and that the contraction which has taken place has by no means been sufficient to bring the total back to that of the pre-war period. Probably this is due in Canada, as in our own country, to the fact that part of the apparent inflation is really a natural expansion due to general commercial development within the country.

In the case of the European countries, on the other hand, the inflation has been much more severe, culminating in Austria Hungary, where the note issues of the central banks increased twenty-fold. Everywhere the elasticity of the currency provided by central banking institutions has prevented the most severe financial panics, though, of course, nowhere could it prevent commercial crises due to the general situation.

Proper Policy as to Rediscount Rates

To summarize: Bankers have had too little experience to state definitely how the expansion and contraction of the currency under the Federal Reserve System is going to work under normal conditions. The unusual stress to which the Federal Reserve System was subjected at the very outset must make bankers and business men everywhere realize that the System, if properly managed and kept free from politics, ought to have no difficulty whatsoever in functioning satisfactorily during normal and less trying years. It will be necessary, however, for the Federal Reserve Banks to educate the bankers of the country gradually to a conception that the Federal Reserve Banks are to be regarded strictly, as their name implies, as a last resort, and that the rediscount privileges are to be used, therefore, sparingly and only in times of stress and strain. There is a danger that, owing to the peculiar conditions under which the System began, its reserve function may have been forgotten. If the Federal Reserve Banks will have the courage to keep the rediscount rates above the prevailing market rate, banks and bankers will gradually learn to make use of their rediscount privileges only in case of real necessity.

This may cut down the large profits which the Federal Reserve Banks have earned in recent years but, after all, the reason for the establishment of these banks was not to earn money either for themselves or for the government, but to prevent losses to the business and banking communities of the country. Every true well-wisher of the Federal Reserve System will desire that in course of time it limit itself to the purposes for which it was created, that it may be kept out of politics, and that it may not be used as a panacea for all financial evils threatening the country as a whole, or any class or section thereof. Its real, primary and sole function is, and ought to be, to provide an elastic currency which may prevent unnecessary financial panics of which we have experienced too many in the past. As one who had much to do with the discussions preceding its creation and who acted as a fatherly adviser during the years of its infancy, the writer expresses the wish: *vivat, crescat, floreat.*

Expansion and Contraction from the Federal Reserve Standpoint

By JOHN H. RICH

Chairman and Federal Reserve Agent, Federal Reserve Bank of Minneapolis

IF kept clearly in mind, several facts will aid in an understanding of the problems which the Federal Reserve Banks have encountered in attempting to exercise an appropriate and scientific control over the expansion and contraction of both currency and credit. The United States is a country of immense extent, of the greatest diversity in its stages of development, in production and in the local availability of capital and investment funds. It is a comparatively new country and in the less developed sections banking is more of a business than a profession. As a nation we lack the beneficial influences of custom, precedent and the fruits of ancient experience. Instead of a homogeneous population, we have invited racial elements from every part of the earth, who have brought with them their own peculiar ideas and customs, all of which must be recognized from the standpoint of practical banking, and all of which tend to exert influences that retard the adoption of uniform practices and scientific banking methods. Bank management is of as diverse a character as the primary interests of the various states, and, broadly speaking, is a matter of adaptability to circumstances rather than the product of careful observance of economic law, sound financial principles and scientific methods. This thought might be summarized in the statement that banking is in a highly evolutionary condition in the United States, and that for the past ten years the period has been a transition from a rather archaic and outworn banking system to a modern and scientific mechanism, somewhat broader than banking itself, that will eventually provide the United States with the efficient system for banking, exchange and credit control which it needs as its equipment for a proper participation in the financial activities of the world.

POWERS OF RESERVE SYSTEM LIMITED

In the nature of things, the Federal Reserve System is not all-inclusive. The System embraces in it only the national banks of the United States, although the Federal Reserve Act also extends liberal privileges to the much more numerous state banks and trust companies. In membership,[1] the Federal Reserve System embraces 9,745

[1] U. S. Bank Figures—June 30, 1921.

	Total[a]	*In F. R. Sys.*[b]	*Per Cent Total*	*Out of F. R. Sys.*	*Per Cent Total*
No. of Banks..........	30,815	9,745	31.6	21,070	68.4
Capital................	$2,904,511,000	$1,858,710,000	63.9	$1,045,801,000	36.1
Sur. & Undiv. Pf.......	3,454,639,000	2,273,795,000	65.8	1,180,844,000	34.2
Total Resource........	49,688,839,000	30,883,023,000	62.2	18,805,816,000	37.8
Loans & Dis. & Redis...	28,944,708,000	18,551,120,000	64.2	10,393,588,000	35.8
Investments..........	11,384,334,000	6,104,655,000	53.6	5,279,679,000	46.4
Bal. due from banks....	4,795,387,000	2,978,276,000	62.1	1,817,111,000	37.9
Individual deposits	35,472,563,000	19,658,809,000	55.4	15,813,754,000	44.6
Nts. & Bills redis.......	1,271,684,000	1,243,764,000	97.8	27,920,000	2.2
Bills payable..........	1,376,891,000	812,241,000	59.0	564,650,000	41.0

[a] Comptroller of Currency's Press Statement, October 31, 1921.

[b] Federal Reserve Board Report, June 30, 1921.

institutions out of 30,815 in this country, or 31.6 per cent. It includes 63.9 per cent of the banking capital of the United States; 65.8 per cent of the surplus and undivided profits, and it comprehends 62.2 per cent of the total resources, and was carrying on June 30 of the present year, 64.2 per cent of the loans and discounts, including rediscounts, of the country. It then held a little more than half of the individual deposits of the United States. With two-thirds of the membership and more than one-third of the resources of the banks of the country outside of the system, it is obviously impossible to expect it to exercise any complete control over expansion and contraction of credit. Its power over currency expansion and contraction is limited, due to the competition of other forms of money than Federal Reserve and Federal Reserve Bank notes.[2]

The rather powerful influence which the Federal Reserve System exercised during the war period, particularly since the radical advances in commodity prices, was fortuitious and due largely to the fact that under the country's pressing need for a sharply increased volume of currency with which to handle its current exchanges, its previously existing and rather inflexible issues were submerged to the extent that the overburden of Federal Reserve notes and Federal Reserve Bank notes became the dominating factor in the currency situation. This was due to the quick responsiveness of these notes to any demands for issue and the fact that they cannot be kept in circulation except in response to demand.

Another factor of great importance in connection with the whole question of expansion and contraction relates to the actual degree of power which the Federal Reserve System is able to exercise over its membership. Its powers are specifically indicated in the law[3] and are in the main of a general and supervisory character. The law seems to indicate quite clearly what specific rights a member in the Federal Reserve System enjoys, but limits in quite a distinct way the power and control over members to be exercised either by the Federal Reserve Banks or the Federal Reserve Board. In a certain sense and considering the subject purely from a practical standpoint, the real powers of a Federal Reserve Bank over its members are indirect and rise out of its contact and association with members at times when they are borrowing. It is difficult to see what very practical powers a Federal Reserve Bank might exercise over the non-borrowing element in its membership. Every Federal Reserve Bank has had such an element of rather substantial proportions throughout the war period. It is authorized to insist that its members maintain their capital stock at the figures fixed by law, that they carry unimpaired reserves and that they make appropriate periodic reports. It is divested of any power to control the policies or loan operations of members and has no authority whatsoever over the rates charged by a member to its customers.

It naturally has no powers of any

[2] The Secretary of the Treasury's Circulation Statement of October 1, 1921 shows gold coin and bullion, $903,163,000; gold certificates, $514,901,000; silver dollars, $75,388,000; silver certificates, $226,610,000; subsidiary silver, $261,602,000; treasury notes of 1890, $1,562,000; United States notes, $341,613,000; national bank notes, $728,314,000; or a total of $3,053,153,000 as compared with $2,518,963,000 of Federal Reserve notes and $119,163,000 of Federal Reserve Bank notes, or a total of $2,638,126,000 of Federal Reserve issues.

[3] See Section 13 of the Federal Reserve Act. Powers of Federal Reserve Banks—Section 11. Powers of the Federal Reserve Board—Section 4. Corporate powers of Federal Reserve Banks.

character over the numerous non-member banks, except that through wise leadership it may inspire the desire to conform to sound policies. In a period of inflation the rapid expansion of member banks' loans and discounts becomes a matter of first importance. Over such a rising tide of borrowings the power of a Federal Reserve Bank is limited. It can restrict, or, for cause, it might refuse the application of a member to rediscount; but its ability to control is largely centered in its position as an adviser in which it would employ the facts developed by its examiners and endeavor to create a clear understanding of all the factors which the situation might involve. In this capacity its value would be largely through wise suggestion and guidance.

There is therefore some question as to the degree of power to control which the Federal Reserve System has over even its own membership. Its real power, which cannot be denied, lies not in legal authorization or specific grant of regulatory authority, but in the confidence it can inspire because of sound leadership and the value it can give to membership because of the business advantages flowing therefrom. An important degree of voluntary coöperation has existed and extends far beyond the confines of its own membership, due to the enlightened self-interest of progressive institutions. It might be said that in a sense the Federal Reserve System, while it is an efficient organization, is more like a voluntary federation of common interests for their own good.

CURRENCY EXPANSION AND CONTRACTION

Not a great deal need be said of currency expansion and contraction as it relates to Federal Reserve issues. The mechanism by which this is accomplished is clearly stated in the law[4] under which each Federal Reserve agent in each Federal Reserve Bank, with the approval of the Federal Reserve Board, is authorized to draw from the Comptroller of the Currency and issue to his Federal Reserve Bank on the presentation of gold and proper collateral, Federal Reserve notes for issue to member banks. Upon the application of a member bank in good standing, accompanied by a tender of eligible paper for rediscount and credit, the Federal Reserve Bank in practice immediately delivers Federal Reserve and Federal Reserve Bank notes in such amounts as may be requested. The process of issue is therefore as nearly automatic as may be, and is properly founded upon the assumption that member banks will not request Federal Reserve issues unless they need them and that the necessities of their communities will rule.

Once issued, the Federal Reserve note moves through the member bank into the hands of the public and when it is no longer needed will find its way back into a bank. Banks which have accumulated more currency than they have use for, will remit to their correspondents or to their Federal Reserve Bank direct. The correspondents are largely members of the Federal Reserve System and the remittance of their excess accumulations is a matter of daily routine. Upon receipt by a Federal Reserve Bank, returned notes are sorted and under the law must be shipped at once for credit to the bank of issue. The particular Federal Reserve Bank has therefore no right of reissue except as to its own notes. Those consigned to other Federal Reserve Banks will reissue or not as the demand of that Federal Reserve District may indicate. If they do not re-

[4] Federal Reserve Act, Section 16. Note Issues.

issue, they are ordinarily returned for credit to the Federal Reserve agent or if worn and unfit find their way to early redemption and destruction. If fit, they are stored against the next period of demand. The method of retirement and redemption is therefore quite as automatic, although somewhat slower in process, than the method of issue. There can be no question but that the mechanism instituted under the Federal Reserve Act to create flexibility of currency expansion and contraction has operated with entire success, and that Federal Reserve notes possess these highly desirable qualities which were lacking in other currency issues of this government and in national bank notes.

The course of Federal Reserve note issues since late in 1920 has been downward. They reached their peak in November, when the aggregate issue was $3,349,000,000, and by October 1, 1921, declined to $2,518,963,000. This recession of $830,496,000 was as significant of the power of contraction inherent in Federal Reserve notes, as was the earlier rise indicative of their responsiveness to the issue demand.

In due time Federal Reserve Bank notes amounting to $119,163,000 will be retired. At a later date under provisions of the law, national bank notes (on October 1, 1921, amounting to $728,314,000) will likewise disappear from circulation. Treasury notes of 1890 are a small factor and their gradual retirement has been provided for by law. There will remain $341,613,000 of United States notes for which no retirement provision is included in the law, and the gold and silver certificates. It is therefore probable that with the gradual fall in Federal Reserve issues there will also be a gradual drift toward the elimination of competing factors in the circulation, with the ultimate result that Federal Reserve notes will control and currency will at last be upon a strictly flexible basis and will have the scientific basis which was contemplated in drafting the Federal Reserve Act.

The course of Federal Reserve note circulation in connection with the price movement during 1920 was very interesting. United States wholesale prices, based on the percentage of 1913 average prices,[5] reached their high point of 264 in May of that year. United States retail prices, based on the percentage of 1914 average prices,[6] held during June and July, 1920, at their high point of 215. The high point of Federal Reserve issues was reached during the last week of October[7] and the first week of November, or sixty days later than the peak of retail prices and since that time have steadily declined. The comparative curves tend to prove the accuracy of the view that currency expansion was the product and not the cause of price inflation and that currency contraction (Federal Reserve issues being the only issues having a real flexibility) was the natural product of the downward turn in prices. In paying cash for wheat at country elevators, it obviously takes more currency to buy wheat at the high point of more than three dollars than at the current price of about one dollar. In the agricultural districts the natural result is that member banks will request Federal Reserve notes in larger volumes during periods of rising prices and that their use for currency will fall off sharply on a declining market.

An important element in maintaining the flexibility and responsiveness of Federal Reserve issues to influences that tend to expand or contract them, is the fact that in current rediscounting

[5] Federal Reserve Board's Price Index.

[6] United States Bureau of Labor Statistics.

[7] *See* Footnote reference on page 178.

operations the larger part of Federal Reserve membership wants credit and not notes. Its demand for notes is wholly the product of local conditions and there is no occasion to request currency shipments unless the local currency supply is insufficient. Credit at the Federal Reserve Bank is more adaptable to its ordinary needs.

It may therefore be said that currency issues from the standpoint of the Federal Reserve Bank occasion practically no concern. They increase or diminish as the fluctuating conditions of each business day may indicate and their connection with such conditions is of the most intimate character. The rise and fall of Federal Reserve issues is so nearly automatic that it requires no extraneous suggestions or encouragement.

Credit Expansion and Contraction

The currency provisions of the Federal Reserve Act have proved a distinct achievement in financial legislation. The expansion and contraction of credit is not so simple a problem. In considering it from a Federal Reserve standpoint the membership figures of the System become in some respects more significant than other items of the consolidated bank statement of the country. Less than one-third of the country's banks are in direct contact with the twelve Federal Reserve Banks. Even this one-third may not be assumed to have continuous contact, since even during the recent period of very severe credit strain it has continuously included a substantial non-borrowing element with which the con-

[7] Trend of Wholesale and Retail Prices and Bills Discounted by Federal Reserve System and Federal Reserve Notes in circulation January, 1920 to September, 1921.

1920	*U. S. Wholesale Prices Per Cent of 1913 Average Price (Federal Reserve Board)*	*U. S. Retail Prices Per Cent of 1914 Average Price (U. S. Bureau of Labor Statistics)*	*Bills Discounted By Whole F. R. System on Last Reported Date in Month (000's Omitted)*	*Federal Reserve Notes in Actual Circulation Whole F. R. System on Last Reported Date in Month (000's Omitted)*
January	242		$2,174,357	$2,850,944
February	242		2,453,511	3,019,984
March	248	196	2,449,230	3,048,039
April	263	207	2,535,071	3,074,555
May	264	211	2,519,431	3,107,021
June	258	215	2,431,794	3,116,718
July	250	215	2,491,630	3,120,138
August	234	203	2,667,127	3,203,637
September	226	199	2,704,464	3,279,996
October	208	194	2,801,297	3,351,303
November	190	189	2,735,400	3,325,538
December	171	175	2,719,134	3,344,686
1921				
January	163	169	$2,456,475	$3,090,748
February	154	155	2,396,254	3,051,706
March	150	153	2,286,648	2,930,729
April	143	149	2,063,739	2,830,118
May	142	142	1,870,256	2,734,804
June	139	141	1,771,562	2,634,475
July	141	145	1,650,496	2,537,617
August	143	152	1,491,935	2,481,466
September			1,402,903	2,457,196

tact of the Federal Reserve Bank was of a limited and oftentimes of quite an indirect character. In this situation probably lies the seeds of the failure of the theory that a fluctuating rediscount rate is an engine for credit control.

Obviously Federal Reserve rediscount rates can control, if at all, only such banks as pay them, and such banks may not confine their borrowings to the Federal Reserve—in fact they seldom do. The influence of the rediscount rate must be of an indirect, and probably of a very tenuous character as to all non-borrowing banks, member or non-member alike. In most of the Federal Reserve Banks there has been some disappointment at the doubtful effectiveness of the rediscount rate in periods of rapid expansion of credit. To the man whose mind is fastened upon a prospective profit it is altogether improbable that an upward revision of one-half of 1 per cent in a rediscount rate which he does not pay directly, will tend to curb him or moderate his activities. Over the agricultural portion of the United States the bank rate of interest is as near to a stable rate as any example that the United States affords. In developed agricultural sections the tendency of the bank rate is to remain at practically the same level throughout the year, and, for that matter, over a period of years. The same tendency is noticeable in the less developed agricultural sections, although the rate levels are higher, and even where bank rates reach their highest levels the rate itself is subject to comparatively little change.

Where there are surplus capital and funds for investment, it is natural that the importance of agriculture should be recognized and that ample funds should translate themselves into fairly stable and relatively low rates to agricultural borrowers. The reverse, however, is not true. In the partially developed sections of the West it has been the habitual practice to attract outside funds by offering attractive rates on time deposits, which, once established, have automatically forced up the loan rate of the bank to its customers. Rates on time money change very little in western United States and they, more than any other factor, dominate and control the rate which must be charged to the borrower if the bank is to make a profit.

It would appear that the only points where the interest rate shows a proper responsiveness to the rise and fall of free funds is at the commercial centers or in the sections which have attained their development. In the very large western areas it has been noticeably true that the rate to the farmer and stock raiser has changed but little throughout the entire war period including the last twenty-two months of very severe strain on credit. This applies particularly to the best names. The availability of credit fluctuates more than the rate. Such a condition has not prevailed at the centers where the rate even to the best names has fluctuated in accordance with a changing money market. These were conditions which the Federal Reserve Banks were not called upon to encounter until after the war period of artificial prosperity had largely spent itself. It then became apparent that they entailed very serious problems, the gravest of which did not develop until the sharp fall in prices began to cause cancellations and extraordinary inventory losses, and to impair the credit standing of many responsible firms. In the stock-growing districts the market for wool collapsed. Live stock prices receded sharply. In the agricultural sections farmers who anticipated a continuance of the extremely profitable price levels saw corn drop to

a point where it was more profitable to burn it than buy coal; and wheat went down to a third of its high war price.

RESERVE BANK POLICY DURING BUSINESS CONTRACTION

If every merchant and farmer caught in the jaws of this distressing situation had been improvident, lacking in foresight and not entitled to bank support and bank credit, the problem might have been easier. It would then have been simple to say that Mr. Smith and Mr. Jones had reaped the fruits of their own errors and to have permitted them to take the usual course through bankruptcy. The conditions, however, were somewhat different. While a certain amount of recklessness, extravagance and failure to consider the future, doubtless existed, price changes were so radical as suddenly to cripple and often seriously to embarrass, entirely worthy and reputable commercial, industrial and agricultural interests. It was necessary in such cases that the banks show no hesitancy in supporting every worthy borrower to the full extent of their power.

It is an interesting fact that this power to help was, to an extraordinary extent, based upon the power of the Federal Reserve System to extend credit. Access to the Federal Reserve Banks was a right enjoyed, under specific provisions of the law, by every member bank. There was, however, no legal bar to loans by city correspondents to non-member country banks, and the immediate result was that the very heavy rediscounting of banks at the centers was translated into equally heavy loans to non-member institutions at widely scattered points, irrespective of the provision of the Federal Reserve Act that denies the use of the credit facilities of the Federal Reserve System to non-members. There is no question but that the financial and business judgment of the country will strongly support the policies pursued by the Federal Reserve Banks when they are properly understood. A narrow or hidebound interpretation of the law, irrespective of the very great physical difficulties which must be encountered in any effort to trace the movement of the proceeds of rediscounts through a large city institution, would immediately have meant the failure of many hundreds of state institutions, a large proportion of which were, under the Federal Reserve Act, ineligible for membership because of insufficient capital. The strain upon the Federal Reserve System was severe enough and there could have been no justification for inviting the crisis which would have been precipitated had the very numerous non-member banks lacked a place to go to borrow.

What happened during the year ending April 28, 1921, is very interestingly shown in a chart prepared under the direction of Mr. Benjamin Strong, Governor of the Federal Reserve Bank of New York. Classifying all the members in the Federal Reserve System by their location in agricultural, semi-agricultural, and non-agricultural counties, we find that during this period the aggregate deposits of banks in non-agricultural counties fell off 4 per cent. In semi-agricultural counties the decrease was 5 per cent; but in the agricultural counties the decrease was 11 per cent. As to their aggregate loans, the decrease in non-agricultural counties was 6 per cent, and in semi-agricultural and wholly agricultural counties the decrease was in each case, 1 per cent. In their aggregate borrowings from Federal Reserve banks, non-agricultural counties fell off 29 per cent, while semi-agricultural counties receded only 2 per cent and wholly agricultural counties increased their borrowings 57 per cent. In aggregate

borrowings from other sources than the Federal Reserve System, the non-agricultural counties increased 1 per cent; the semi-agricultural counties, 19 per cent and the agricultural counties, 66 per cent. It therefore appears that agriculture, in which is included live stock, drew down its deposits, failed to decrease its loans, and in both cases made extraordinary increases in its borrowings.

A situation such as this was sure to produce peculiar problems in a Federal Reserve Bank. Let us suppose that in one of these agricultural sections a member bank had already increased its loans and discounts to the limit of safety while carrying reasonable rediscounts with its Federal Reserve Bank and substantial bills payable with correspondents. The long delayed liquidation in its territory fails to develop. Its farmer customers, perhaps five or six hundred in number, are man and man alike obliged to pay their debts contracted on a basis of high wheat and high corn, with wheat and corn having an abnormally shrunken market. Obviously the bank would fail in its responsibility to its community if it arbitrarily refused loans and forced payment. The facts were that in very numerous cases the enforcement of payment was practically an impossibility, since the crops lacked liquidating power. The Federal Reserve Bank's problem, therefore, became broader than that of the bank itself. It became a problem of carrying through the farmers or business men until they could again find a safe footing.

In some sections of the West it was necessary to continue this policy through four successive failures of the crop. The bank's alternative was to loan the minimum that was necessary to enable its customers to weather the storm or encounter a prompt insolvency. Within a very brief period fifty-three banks in a certain western state, and numerous banks in the South and in other portions of the country, mainly in districts that are agricultural, went to the wall. In such an emergency it is fruitless to rely upon the fluctuations of a discount rate. An increase of 1 per cent would not deter a bank in very grave difficulties from presenting eligible paper for rediscount at a Federal Reserve Bank. There can be no question of the legal right of a member in the Federal Reserve System to present eligible paper for rediscount. Upon the presentation of such paper the problem becomes one for the executive committee and executive officers to solve. They must determine whether in view of all the facts and circumstances the rediscount of particular applications is justifiable. I have indicated that during the recent abnormal period the justification of rediscount did not necessarily depend wholly upon the credit standing of the applicant or upon the character of the paper presented. Because of these conditions, which nullify the effect of discount rate changes, it is frequently necessary to carry a bank beyond what would ordinarily be considered safe or prudent limits in order to protect its depositors and its community and maintain the stability of the general banking situation. This has been particularly true where loans were "frozen" and slow rather than doubtful.

With a clean and reputable member under capable management in acute distress and faced with the alternative of obtaining additional assistance or closing its doors, there can be no question as to what the policy of the Federal Reserve Bank should be. It is better to save the reputable banks, assist their worthy customers, whether business men or farmers, to weather the storm, and hope for rehabilitation later, than

to take a narrow view and force the bank to the wall, unsettle public confidence and perhaps precipitate again such conditions as were a quite familiar experience prior to the establishment of the Federal Reserve System.

The Rediscount Rate as Credit Regulator

Any discussion of credit control at the present time is necessarily colored by recent experiences and may perhaps have a less practical value because of the abnormal nature of the period from the beginning of 1920 down to date. Such a period does, however, carry its own lessons. One of the most important is that dependence upon the discount rate is a fallacy until the discount rate can be made generally applicable to the borrowings of all banking institutions in the country. Pending such development the real control of credit in the Federal Reserve System will lie not in the rate but in the accuracy and precision of judgment of the boards of directors, executive committees and executive officers in each of the Federal Reserve Banks, with the able leadership and excellent advice which they have unfailingly received from the Federal Reserve Board.

To the borrowing individual or borrowing bank, such strain and emergency destroy the effectiveness of control through the rediscount rate. The question then becomes one of expediency and safety and not one involving scientific application of a theory, which, while it works well in smaller and better developed nations, will have a doubtful practicability in the United States until it reaches equal development and has an equally well-knit population, properly seasoned by precedent, custom and established rule.

On the other hand, it cannot be doubted that the existence of a discount rate has been an influence of exceptional value. Some of the critics of its result in operation have apparently overlooked the fact that the Federal Reserve System during the period of the War was necessarily dominated by Treasury policies, and that it did not have an opportunity to work out a discount rate policy of its own. Within a very recent period a certain group of eastern banks encountering relatively the same conditions have gone to a flat 4½ per cent basis. A second group of banks, between the better developed East and the partially developed West, but having much the same problems to meet, have adopted a 5 per cent basis. The remaining banks in the undeveloped sections have gone to a 5½ per cent basis. We have therefore in the Federal Reserve System, for the first time, what is practically a uniform policy in the fixing of rediscount rates, and the new rates are as uniform as may be as to the districts where conditions are similar.

Under normal conditions there should be a differential between the developed East and the undeveloped West. Such a differential cannot always exist because it will be affected temporarily by stress and unusual developments in the money market. It has the merit of affording guideposts by which the 30,000 banks in the United States may judge country-wide credit conditions, and while their freedom and independence in making rates to their customers is in no wise impaired, it will unquestionably prove that Federal Reserve discount rates which maintain the proper relation between the different areas of the United States and which keep reasonably in line with their upward or downward movement, will have a very material indirect influence. They will probably tend in the long run to equalize bank rates in sections where conditions are similar and to prevent abnormal differ-

ences in the customers' rate in different sections of the country.

From a practical standpoint the control of credit is largely a matter of leadership and example. It is becoming clear that each rediscount application in a Federal Reserve Bank must receive a high degree of individual study and that there must be devoted to it a specialized judgment which takes full cognizance of all the facts surrounding it. In western Reserve Banks, at least, it is improbable that the conditions of any two borrowing banks will prove to be exactly parallel. These differences must be recognized and as they develop they call for keen banking judgment rather than the application of a rule. In the last analysis the control of credit through the Federal Reserve System is, therefore, a matter for the executive officers and executive committee in each individual case. They must set up their own policies, form their own judgments, and endeavor to hold all applications from borrowers to proper standards, which if they are to be valuable must not be inflexible. From an intimate viewpoint it is clear that the success the Federal Reserve Banks have had in enabling this country to avoid disaster, while not complete, was still extraordinary and that it had its foundations not in any question of rate control but in the application of shrewd and precise judgment to many thousands of separate and distinct problems.

In checking expansion, the promptness and courage of the Federal Reserve Banks in taking a stiff stand against inflation is likely to prove more efficacious than any decision to advance the rate, although both actions must go hand in hand. In reality it might be said that an advancing or receding discount rate is of material advantage as a warning signal but that the practical work of the Federal Reserve Bank is in its executive committee and that the degree of control which it exercises, which is necessarily limited by the insufficiency of its membership, will be proportionate to the farsighted vision and courage of the Federal Reserve Board, which supervises, and the executive control in each Federal Reserve Bank, to which each problem must ultimately come for settlement.

Principles Governing the Discount Rate[1]

By W. P. G. Harding

Governor of the Federal Reserve Board

CONTROL over discount rates, as exercised by the Federal Reserve Banks and the Federal Reserve Board, is one of the most important and far-reaching powers ever delegated by Congress to another instrumentality. The grant ranks with the power given the Interstate Commerce Commission to regulate railroad rates. While it is necessary that powers of this kind should be vested in a few hands, they should be used with discretion and the effect of a change in rate should be carefully considered before the change is made.

The principle is well established that in theory the Federal Reserve

[1] Remarks at the opening session of the joint conference of the Federal Reserve Board with the Federal Reserve Agents and Governors of Federal Reserve Banks held at Washington, D. C., October 25–28, 1921.

Because of his official position, Governor Harding did not feel at liberty to express a personal opinion. In this paper, however, he states the problem as it has been brought before Federal Reserve authorities.

Bank discount rate should be slightly in excess of current rates. There has been much discussion of the reductions which have been made in discount rates during the last six months and, disregarding the opinions of the prejudiced and the uninformed, let us consider the conflicting views of some whose opinions are worthy of attention and respect.[2]

Views on Rediscount Rates

A New York banker and an eastern economist expressed themselves as follows:

> The basic idea in this policy of keeping the rediscount rate above the market is that Reserve Bank money is for exceptional and unusual use—that it is not the province of a Reserve Bank to supply a substantial part of the ordinary funds employed in the market in ordinary times. Of course, it is expected that a Reserve Bank shall make money for its stockholders and shall employ such of its funds as may be necessary to meet expenses and to pay dividends. One provision of the Federal Reserve Act, permitting open market operations on the part of the Federal Reserve Banks, was designed to give them discretion in this matter, whether the member banks should rediscount with them or not. But the position of a Reserve Bank is a very peculiar one. If an ordinary bank makes a loan, checks come in against it, as a consequence of the loan, which it must meet out of its reserve unless it should happen that, simultaneously, new deposits are made with it of checks drawn on other banks. Loans made by a Reserve Bank, however, need not lead to drains on its reserve. When, in making a loan, it issues its notes or gives a deposit credit to a rediscounting bank, that note or a transfer of that deposit credit will be accepted as ultimate payment by some other institution. The deposit liabilities of the Reserve Bank count as ultimate reserve for the other banks of the country, and the volume of reserve money is consequently increased through a mere increase in the deposit liabilities of the Reserve Bank. With an increase in the volume of reserves of the member banks, there is an immediate tendency to a reduction in the general level of discount rates throughout the country, placing them below the level which open market conditions would otherwise call for and creating a temptation for the uneconomical use of bank funds. There is particularly a temptation to use bank funds in an excessive degree for capital purposes, and for the ordinary banks of the country, misled by the artificial excess of liquid cash, to tie up too great a part of their assets in non-liquid form. The Reserve Bank which makes rediscount rates too low, therefore, instead of performing its function of increasing the liquidity of the banking system, tends rather to destroy liquidity.

A Chicago banker reiterates the opinion, expressed by him several times, that the Federal Reserve Banks and the Federal Reserve Board ought to proceed very slowly in lowering the present rates. He anticipates that there is considerable danger, in case the rates are lowered precipitately, of a renewed inflation, with a consequent reaction more violent than that through which we are now passing. He takes the view that, in general, it is a complete mistake to have the rediscount rates lower than the prevailing market rates for commercial loans, for if banks are enabled to rediscount their paper at a lower rate than they themselves receive, obviously a continued inflation is profitable to them. His opinion coincides with the views of the eastern banker and the economist above quoted, and he stresses the point that our large gold reserve is, after all, due only to the fact that gold is not being circulated at the present moment and that much of this gold is likely to flow out of the country as soon as there is a change in the bal-

[2] The quotations which follow are from a symposium recently published in a financial journal.

ances of trade. He concurs, also, in the view that a certain amount of the gold which the Federal Reserve Banks have at present is, in a sense, merely held in trust for Europe. He regards as entirely fallacious the argument made by adherents of a policy of lowering rediscount rates that such action is desirable because the reserve ratio and gold accumulations of the Federal Reserve Banks justify a relaxation of the official rates.

A Milwaukee banker who contends that the policy should be in accord with the money market tendency, states:

The main point made by those opposed to the lowering of Federal Reserve discount rates is that the rediscount rate should always be above the market rate. This is laid down as a general principle to which there are no exceptions. Federal Reserve funds are only emergency funds, it is said, and it should not be possible for banks to make a profit by rediscounting at a lower rate than the market.

When the demand for credit is excessive and increasing, the Reserve Banks should move into a dominating position by raising their rates above the market rates for money. But the same necessity for discouraging resort to Federal Reserve Banks does not exist when the demand for credit slows down, loans are being paid off and reserves are accumulating. What has happened as a result of the recent lowering of rediscount rates? Has it resulted in an expansion of loans or reinflation? Not at all. On the other hand, the published records show that member banks have continued to reduce their rediscounts and borrowings and to do this have brought pressure upon their customers to liquidate. Customers who have voluntarily liquidated and got themselves back into good financial condition are offered lower rates on new loans. This, of course, is an incentive to those who have not done so to liquidate. This is the practical way in which the leadership of the Federal Reserve Banks in reducing their rates has worked. There has not been the slightest tendency toward renewed inflation. Rather the tendency has been to further liquidation. . . . The general principle of keeping Federal Reserve rediscount rates above the market rate for money is sound, but it does admit of exceptions as in the present condition of things. The present Federal Reserve policy is in accord with the tendency of the money market and it is hard to see how it has had, or will have, any but a wholesome and constructive effect.

In a recent publication a well-known banker and economist has asserted that the best index of the money market in this country is the rate on line-of-credit loans to borrowers from two or more banks, and not the rate on bank acceptances, as in England. The volume of line-of-credit loans in this country is far larger than the volume of bank acceptance credits, but it may be doubted whether the rates on such loans are as competitive as bank acceptance rates. Bank acceptance rates are fixed in the open market and are published. Line-of-credit loans have no open market and there are no published rates. Line-of-credit loans are not as competitive as they may seem. A small firm commonly maintains a line of credit only at its own bank. Large corporations usually have lines of credit not only with their home banks but with large banks in financial centers, not necessarily because they can secure lower rates, but because no one bank wants to take care of their full needs. For these reasons it is to be doubted whether line-of-credit loans afford as good an index of money market tendencies as the bank acceptance rates. The latter represent the minimum rates for the best class of paper and, because this is so, they indicate far beyond their actual money volume the drift of the market. The present rate on eligible bank acceptances of $5\frac{1}{8}$ to 5 per cent is a better indication of what is taking place and what may be expected in the open money market than rates on line-of-credit loans which reflect market condition more slowly.

Another Chicago banker takes an extremely conservative view. He would like to see many of the so-called "war amendments" to the Federal

Reserve Act repealed and states that as the law stands, "nothing but the courage and wisdom of the management prevents it from becoming a disastrous engine of inflation." He objects particularly to the amendment which forces member banks to carry their entire lawful reserves in the form of collected balances with the Federal Reserve Banks and believes that this amendment, which he regards as practically demonetizing gold, is most dangerous in normal times. Referring to the complaints which have been made that the agricultural districts have been discriminated against, he believes that exactly the opposite is the case and appears to believe, also, that the Federal Reserve System has worked a great injury to the country as well as inestimable benefits. He states:

In a time of inflation such as we had a year ago, it nullifies the operation of the usual normal remedies for such conditions. If it had not been for the Federal Reserve Banks, farmers generally would have been compelled to sell their crops a year ago and pay their debts. This would have saved them and the country from the disaster that has overtaken them. Also, had it not been for the Federal Reserve Banks, manufacturers and merchants would have been unable to accumulate or carry the heavy inventories entailing losses in a single year which it will take a generation to replace.

The solution to this is to keep the Federal Reserve discount rates above current market rates, so that there will be no temptation on the part of the member banks to profiteer through the Federal Reserve Banks. So long as the Federal Reserve rates are kept below current rates, there is, in my judgment, no way in which this kind of inflation can be prevented. On the other hand, if borrowers compel their banks to rediscount in order to enable them to carry crops or goods for higher prices, they are put on notice that they are acting against the general judgment. In normal times member banks should understand that they are not expected to borrow except to meet emergencies, and they should be made to feel that borrowing at such times is an indication of weakness and needs explanation.

He expresses the hope that the Federal Reserve Board will make a public statement of what its future policy will be regarding rates and expresses the belief that the confidence of the country in the Board is such that any clear statement of fundamental principles made by it would be acquiesced in.

Another New York banker while convinced that under normal conditions it is logical that the Federal Reserve rate should be higher than the prevailing commercial rate, believes that in view of the world-wide conditions that exist today, the adoption, at this time, of artificial means to accelerate the process of readjustment would be a dangerous course to pursue. He states:

Considering the extent to which credit for speculative purposes has been liquidated, and also taking into consideration the present reserve and gold position of the Reserve Banks, it would seem that the reduction in rate is fully justified. Furthermore, I do not believe the reduction at this time in the rate will appreciably encourage a tendency toward renewed credit inflation. The question of rates has, on the whole, been ably and courageously handled by the Federal Reserve Banks and the Federal Reserve Board.

He says that if he were to offer a critical observation, it would be to remark upon the "salutary modification of the need for deflation that would have resulted had the high rates been put into effect in the spring of 1919 instead of the summer of 1920."

A Boston banker takes the view that the Federal Reserve System was

organized for the purpose of furnishing credit, by means of rediscounting, to the commercial banks of the country. He says:

In a general way the time when this credit is needed is just before, during and immediately after, a credit crisis, or credit pinch, and it seems clear that at such time the rate charged for rediscounting should be at about the current market rate charged by the commercial banks to their customers. To make the rate higher than the prevailing rate would tend to restrict the granting of necessary credits to merchants and similar borrowers. To make the rediscount rate much lower than the prevailing rate would tend to encourage over-loaning by the commercial banks. In fixing the rediscount rates, the managers of the Federal Reserve Banks should try, as far as possible, to keep their minds free from influences other than those which directly concern the prevailing rates of money, but they certainly are justified, when fixing rediscount rate, in being influenced by motives of the safety of the Federal Reserve Banks themselves, and when the rediscounts appear to be approaching a dangerous total, they should use their rate-fixing power to check speculation and to prevent any possible danger to the Federal Reserve Banks, which are the foundation of our whole banking system. It was never intended, and never should be intended, that the Federal Reserve Banks consciously use their power and authority either to encourage or to discourage business. Their chief purpose should be to assist commercial banks and to fix the rates of rediscount so as to best accomplish this, and at the same time to protect their own position from any possible overstrain.

He regards as one of the greatest dangers to which the Federal Reserve System can be subjected, the attacks and manoeuverings of politicians to make the System serve political ends.

Another leading banker does not believe that the time has yet arrived when discount rates should be held up to a point above the rates for commercial paper because the conditions of business are not yet on a normal basis. He says that it has been the habit of commercial bankers to argue with their commercial customers that the rate to their customers is based on the Federal Reserve Bank discount rate and that it should be enough higher than the discount rate so that there would be a profit to the banker between the discount rate and his rate to his customers. He says further:

There is yet in our banks a large amount of so-called frozen loans which may be described as loans which are probably good but which the borrowers are not in a position to pay off at the present time. Therefore, they are not in a position to trade on market rates on an even basis with the banker. Under these conditions, a high discount rate of the Federal Reserve Banks simply has helped the commercial banker to get higher rates from his customers than are justified by the conditions of credit. Therefore, it was desirable and necessary for the Federal Reserve Banks to reduce their discount rates from 6 or 7 per cent to 5½ per cent in order to inform the commercial community that the credit situation no longer demanded these high rates.

He takes the view that "Federal Reserve Bank discount rates should not be made with the idea of controlling business or market prices of commodities," but that "they should be indications of the effect that the present business is having on the supply of credit and of anticipated conditions that will affect the supply of credit in the near future." He believes that "when the business community has become trained to the point of watching the reserve position and discount rates of the Federal Reserve Banks and has come to an understanding of what these figures mean, it will be helped very much

by studying the published conditions of the Federal Reserve Banks and will appreciate what a change in discount rates means, provided of course that the officers and directors of the Federal Reserve Banks are not hampered in using their judgment in these matters by outside influences."

A Chicago merchant notes the difference of opinion among experts as to the proper time for raising or lowering the Federal Reserve rediscount rates. He points out that neither the Federal Reserve System nor any part of it can be run on any formula, and that if it could, very little brains would be required for that part after the formula had been found. He believes:

> If we are to be a world power in commerce, as we may be, we shall have to make the New York, or some other district rate attractive for the discount of the world's import and export bills. We might, of course, be above the English rate for a short time, for adjustment or other purposes, but if we make a rule to have the rate always above the commercial paper rate in New York, our ambition to be the world's bankers, or to compete with England in commerce and finance, will vanish into thin air.

He takes the view that in crises and extraordinary emergencies a Reserve Bank may well be justified in violating temporarily the ordinary canons of sound finance, but emphasizes the fact that under normal conditions and under conditions when it is possible to take a long-run view, the well established traditions covering a Reserve Bank's operations must be followed. The chief of these canons is that the rediscount rate of Reserve Banks should be kept above the market.

Recommendation of Advisory Council

The Federal Advisory Council, at its last meeting on September 20, 1921, expressed its belief that rates should bear a direct relation to a Federal Reserve Bank's reserve and to the general money market, and that, in addition, consideration should be given to the items enumerated in the Council's recommendation of May 17, 1921, as follows:

1. The reserves of the Federal Reserve System as a whole.
2. The reserve position of the Federal Reserve Bank whose rate it is contemplated to change.
3. The condition of all the banks of the country as a whole, and of the several Federal Reserve districts.
4. The economic and financial condition of this country.
5. World conditions, both economic and political.
6. The eventual establishment of a credit rate policy for the Federal Reserve Banks by which the rediscount rate to member banks is higher than the prevailing commercial rate, taking due consideration of the prevailing open-market rates for various classes of loans both in this country and abroad.
7. Uniformity of rates, while at times practicable and desirable, should not be adopted as a fixed policy, the System being predicated upon the principle that varying conditions might exist in different sections of the country.

With reference to the general money market, the following factors were suggested by the Board as those which should be considered in arriving at a conclusion as to what is the current rate for money:

1. Rates charged by banks to their regular customers.
2. Rates for one-name paper bought through note brokers.
3. Open market rates on bankers' acceptances.
4. Rates on Treasury certificates.

The Board asked the Council for its views as to the relative importance of each of these factors and the Council expressed the view that all four items

mentioned are important in determining the money market but there may be other factors which should likewise be given consideration, such as general business conditions and the reserve position of a Federal Reserve Bank. It was the view of the Council that the ruling rate for money in a district will adjust itself automatically to these conditions. The Council expressed the view, also, that a Federal Reserve Bank while it is borrowing should not lower its rate, but stated that special conditions might exist in a district which would make a reduction desirable and would justify such a course.

REDISCOUNT PROBLEM CONFRONTING THE BOARD

It seems clear to the Board that it is not practicable in this country for Federal Reserve Banks to maintain rates of discount higher than current market rates if line-of-credit loans are to be accepted as the criterion. The rates of interest permitted in many states are so high as to preclude this as a possibility. In ordinary circumstances when the credit risk is at a minimum the rates paid for high grade commercial paper sold in the open market may be regarded as a measure of the market rate for money, but it is evident that at present there is much consideration to be given to the basis on which short time obligations of the Treasury are sold and to market rates for prime bankers' acceptances. The problem, therefore, is more simple at this time in districts like New York, Chicago and Philadelphia, where the Federal Reserve cities are dominant in their districts; but in other districts which cover a larger territory and where the business is more distributed and diversified, the problem is more difficult. At the present time, four Federal Reserve Banks are rediscounting about $45,000,000 with three other Federal Reserve Banks. The directors of one of these borrowing banks more than a month ago voted to reduce their discount rate from 6 per cent to 5½ per cent on all classes of paper, but the Federal Reserve Board has not yet approved the reduction. No evidence has been presented to show that current rates for bank accommodations are less than the Federal Reserve Bank rate, or that current rates would be reduced by lowering the Reserve Bank rate, but the directors argue that the consolidated reserve position of the System justifies a lower rate.

The Board has been inclined to the view that the reserve percentage of each Federal Reserve Bank, as well as that of the System, should be taken into consideration as one of the determining factors in fixing the discount rate. If the Federal Reserve Bank of Chicago, with a reserve of around 70 per cent and the Federal Reserve Bank of St. Louis, with a reserve of 63 per cent do not feel justified in reducing their discount rates below the present level of 6 per cent, what argument is there for a borrowing bank, like Atlanta, having a reserve without rediscounts of only 32 per cent, to have a 5½ per cent rate? On the other hand, what are the arguments against a reduction in districts which have so high a percentage of reserve?

Rediscount Rates, Bank Rates and Business Activity

By GEORGE M. REYNOLDS
Chairman of the Board, Continental and Commercial National Bank of Chicago

THE problem of greatest interest and importance now confronting the Federal Reserve Banks, the commercial banks and the business world, is the rediscount rate and its effect on or relation to business activity.

The simple answer to the question whether the rediscount rate of the Reserve Banks should be higher or lower than the rate charged by commercial banks—whether this means the line-of-credit rate, over-the-counter rate or commercial paper rate is not clearly defined—is that the rediscount rate should be higher.

This answer seems to flow readily from British practice and recent American experience. But the economic situation, at home and abroad, is not so simple as to permit this offhand and categorical answer. American experience under the Reserve System has not been sufficient for the dogmatic statement of a formula for the future. The Reserve System has not functioned to any extent under conditions it was designed to meet; it has faced chiefly the very unusual conditions which attended the prosecution of war and the uncertainties and abnormalities that followed. At this time it seems impossible to do much more than state the problem as it is made out of and affected by a great variety of elements. The ascertainment of these elements involves investigation of business customs, bank habits, government operations and, perhaps, the psychological influence of public sentiment.

It is hardly possible to base any rule of future action in regard to rediscount rates on experience as gained by the Bank of England. Conditions in England and America are so different that the British rule as to the bank rate contains little of value except for suggestion, and even this little decreases as the banking and commercial paper customs of the two countries are contrasted. In the United States, for instance, the Reserve Banks have no direct relations with the public and receive deposits only from banks and the government. In this country the "open market" has few points in common with the English bill market. In the United States there are over 30,000 independent banks scattered through a vast territory whose activities are tremendously varied, instead of a few banks with thousands of branches serving a country of high industrial and commercial development.

The view is often expressed that the rediscount rate should be invariably higher than the market rate—usually meaning the prevailing rate for commercial paper—because the Reserve Banks are, after all, *reserve* banks and should be called on for rediscounts only when the bank desiring to borrow is under strain. There can be no disagreement about the desirability of the increase in rediscount rates when business expansion needs to be checked, and there may be reason for keeping them regularly higher than the market rate. It must not be forgotten that, whatever the Reserve Banks may be in law, in fact, they are regarded no less by bankers than by business men and the public as a kind of financial hospital to which all classes may go to have their wounds treated, regardless of the causes of the wounds. The banker, and the business man through his banker, wishes the same treatment whether he

has been hurt through his own derelictions or through a conjunction of economic causes, unforeseeable and uncontrollable. But the determination of a rediscount policy for the future calls for close analysis.

INFLUENCES THAT HAVE AFFECTED REDISCOUNT RATES

Since the depression following the War the factors influencing rediscount rates have been given serious consideration. At its meeting in September, 1921, the Federal Advisory Council expressed the view that rediscount rates should bear a direct relation to a Federal Reserve Bank's reserve and to the general money market, and that, in addition, consideration should be given to the items enumerated in the Council's recommendation of May 17, 1921, as follows:

1. The reserves of the Federal Reserve System as a whole.
2. The reserve position of the Federal Reserve Bank whose rate it is contemplated to change.
3. The condition of all the banks of the country as a whole, and of the several Federal Reserve districts.
4. The economic and financial condition of the country.
5. World conditions, both economic and political.
6. The eventual establishment of a credit rate policy for the Federal Reserve Banks by which the rediscount rate to member banks is higher than the prevailing commercial rate, taking due consideration of the prevailing open-market rates for various classes of loans both in this country and abroad.
7. Uniformity of rates, while at times practicable and desirable, should not be adopted as a fixed policy, the System being predicated upon the principle that varying conditions might exist in different sections of the country.

It was further suggested that with reference to the general money market the following factors should be considered in arriving at a conclusion as to what is the current rate for money:

1. Rates charged by banks to their general customers.
2. Rates for one-name paper bought through note brokers.
3. Open-market rates on bankers' acceptances.
4. Rates on Treasury certificates.

This series of rules is apparently given potentially. What have been the determining factors in fixing rediscount rates heretofore seem nowhere to have been given in a similar summation. In the first year or two of the Reserve Banks' operations little attention was given to the rediscount rate. Money was plentiful and there was little rediscounting. The War and its demands brought a change. It is no secret that government financing took precedence over everything else. The rediscount rate, regardless of any influence it might have on business, was adjusted so that the purchasers or holders of war bonds would receive preferential treatment. Otherwise, it is doubtful, with adherence to the Reserve Banks as the instruments whereby credit was to be made available for war purposes, if the war bonds could have been successfully sold at the rates they bore. It was when this need became apparent that the rate was placed at a low point. Business was, of course, a beneficiary. There was no departure from this policy during the War nor, as is often pointed out, until some time after the Armistice.

On pages 62 and 63 of the hearings entitled "Reviving the Activities of the War Finance Corporation," will be found the following by Governor Harding:

The Federal Reserve Board adopted a policy in order to assist in the war financing

which was economically unsound. I say this frankly. Congress authorized certain loans. It authorized the Secretary of the Treasury to determine the rates at which the loans should be issued. The Secretary of the Treasury asked the advice of experts and then fixed the rates of interest to be borne by the several issues of bonds, notes, and certificates. During the time we were actually at war, something like $18,000,000,000 of bonds were sold to the people, an amount certainly in excess of the normal investment power of the American people in such a short time, and the only way in which those loans could be financed was through the instrumentality of the banks. The only way the banks could undertake to do it was to get some assistance from the Federal Reserve Banks and at a low rate. The low rate of interest borne by these bonds was fixed with a view of holding down the expenses of the government as far as possible. Anyway, that is something the Federal Reserve Board has no responsibility for. In order to make possible the floating of these bonds we fixed a rate less than their coupon rate. Some member banks announced that for a period of six months there would be a rate of 4 ¼ per cent on notes secured by government obligations. The result was that there was no loss to subscribing banks pending the distribution of the bonds to the public. There were successive bond issues. The principal reason why discount rates were not increased earlier than they were in 1919 was on account of Treasury financing.

Thus it appears that government financing and the desire to have war bonds bear low rates of interest were the determining factors until disaster was scented in 1919. Then present and impending troubles dictated the increase of rates, which was belated. It was some time before this increase that liquidation began. It was a considerable time afterward that deflation became a visible reality. It may be said only with diffidence that the increased rates had anything more than a moral effect. Members of the Reserve Board said repeatedly, and cited figures to show, that the peak of credit and currency expansion was reached some months after higher rates were made effective. This indicates either that business had such an impetus that rediscount rates had no effect in stopping it, or, if they had any effect, considerable time was required to make it apparent. If this experience is to be taken as a demonstration of the efficiency of an increased rediscount rate to stay business activity, it must also be taken as a first indication of the time relation between an advance or change of rate and business operations.

But whether the high rediscount rate did or did not halt business and force deflation and liquidation, or whether business toppled over for other reasons, there is no doubt that it toppled. Gradually the credit situation cleared and is still clearing. Coincident therewith further study of the rediscount rate and its influence and effect began. As the reserve percentages of the Reserve Banks began to mount, the demand for lowering of the rates became more and more insistent. The increase of reserves was not, however, due entirely to liquidation. The flow of gold from abroad was steady, and became a very important, if not the most important, factor in building reserves up to a high point. It must also be noted that the rates charged by commercial banks did not go down either simultaneously with those of the Reserve Banks, or proportionately to them. Commercial banks were affected only indirectly by the great inflow of gold. It required liquidation by business to permit them to build up their reserves and pay off their debts to the Reserve Banks.

This would seem to show that rediscount rates were fixed with no consideration of the rates charged by the commercial banks. The assump-

tion of a causal relationship between the two, therefore, remains to be proved by the presentation of evidence that the experiences of the past two years does not offer.

The Time Relationship Between Business Commitments and Borrowing

If no relationship, or one that is indirect or nebulous, exists between rediscount rates and commercial bank rates, it becomes apparent that there can be no relationship, or, at least only a very remote one, between rediscount rates and business activity; it is the commercial bank rate that business pays, not the rediscount rate.

For present purposes, then, the question may be stripped down to the time relationship between the rediscount rate and the commercial bank rate, between the commercial bank rate and business activity, and then between the rediscount rate and the latter. For the present, also, it will be necessary to ignore the manifest influence of remote and indirect causes. In a business scheme so intricate as that of the world today, it would be hazardous to be dogmatic about such relationships. The problem is, however, to determine, if possible, the more immediate relationships—the causes which act and react on one another so as to permit the application of direct evidence. It is pertinent here to note, for instance, that there are some thousands of banks which are not members of the Reserve System; that each operating bank is an independent entity, subscribing to no rules as to interest charges and often getting "all the traffic will bear"; that loan risks vary with classes of business and in different districts, and that the demand for capital forces new and undeveloped sections to bid high in order to attract funds. It is probably only in the large centers and well developed industrial districts that money rates are subject to the controlling influence of reserve condition, supply and demand, gold imports, etc.

To get at the time relationship between business activity and borrowing, it is permissible to take for example the customary operations of a merchant or manufacturer. It is common knowledge that his interest in the present state of all business and of his own business is shared with his concern for what the future holds. He plans and manufactures and buys for a coming season. No matter how active present operations, the future concerns him as much. He may or may not sound out his banker as to his coming financial needs. Whether he does or not, he makes contracts and commitments for a coming season. If the banker has committed himself in such cases, he will to some extent have foreknowledge of the demand to be made upon him. But often, if not usually, he may be wholly unaware of what his customer contemplates. Business men will not arrange in advance for credit unless they foresee the impossibility of meeting their obligations out of current resources. If they have a line of credit, they will not indicate their intention to use it at a particular time or during a particular season unless it promises to be insufficient for their prospective needs. Nor will the member bank signify its intention to rediscount in the future.

In such circumstances the business world, each unit operating by itself, may be building the foundation of a credit structure in the autumn; the commercial banks may not be called on for loans until spring and it may be midsummer before the contracts and commitments made months before are reflected by a demand for rediscounts at the Federal Reserve Banks. How

is a rediscount rate going to meet an over-extended condition, in the summer, which was produced by operations begun and completed many months before?

Commercial bank officials and those of Reserve Banks, also, study business conditions constantly. Many of them have information and statistical organizations. They gather the best statistical evidence they can, but the Reserve Bank officers have no privity of interest and no intimacy of relationship with business men. Even with superior advantages in this respect, officers of member banks cannot anticipate conditions except in a very general way. One banker might be alarmed at the prospect of a large demand for loans and his competing neighbor have no evidence of such impending events at all.

It is such conditions that call into play the highest banking skill and judgment. Such conditions demand of the banker a prescience which can come only from such a familiarity with business that he feels rather than knows what is before him. In making his half-intuitional estimates he will, of course, take account of the fact that the Reserve Bank is ready at hand if there is need. He will take care of his customers and try to adjust his rates to competitive conditions. His conclusive "no" will send potential borrowers to other banks, to the levelling of the business of all of them and a fairly accurate adjustment of interest rates. But, dealing only with banks, Federal Reserve officials will have an imperfect knowledge of these conditions. And yet upon them rests the obligation of leadership in checking or stimulating business by a proper adjustment of the rediscount rate, if the rediscount rate can do it.

It seems fair to say that while an effort may have been made or is being made to adjust rediscount rates on the basis of ascertained future business operations, the probability is that the rate has been fixed only in relation to what is or what has been, so far as it has been fixed at all in relation to business activity.

CONCLUSIONS

The import of this article has been:

1. That rediscount rates cannot be fixed on the basis of British experience.

2. The opinion that rediscount rates should be higher than commercial bank rates is based on experience during war conditions and business contraction which may not be a sufficient guide for the future.

3. Rediscount rates have heretofore been fixed chiefly by consideration of factors other than their possible effect on business activity.

4. Rediscount rates can affect business activity only through bank rates which bank customers must pay.

5. Bank rates are not only different in different sections, but are determined by present conditions, whereas business commitments are made for the future.

6. To influence business activity, bank rates would have to be determined in relation to the future commitments of customers and the rediscount rate would have to be in correspondence with the bank rate, both as to amount and time.

7. It is the knowledge and judgment of bank officers and reserve officers on which reliance must be placed for the control of business conditions through credit.

8. Insofar as the rediscount rate can affect business activity, it must be determined far in advance if it is to have any appreciable effect.

There has been no disagreement among bankers as to the necessity for raising the rediscount rate when the need of checking business activity was certain. If recent conditions gave promise of permanency, there could be no question as to the desirability of having rediscount rates always higher than bank rates. On the basis of

actual recent experience only one policy has been warranted. But as to a policy to control in the future, further experience must be the guide. In any event, changes in rediscount rates must be made well in advance of foreseeable changes in business activity, if the rates are to be used for the purpose they are commonly supposed to serve.

Theoretical Considerations Bearing on the Control of Bank Credit Under the Operation of the Federal Reserve System

By CHESTER A. PHILLIPS
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THE most important change in our banking machinery entailed by the Federal Reserve Act as bearing upon the question of the expansion and contraction of our circulating media is the introduction of compulsory bankers' banking. The essence of bankers' banking in the United States is the reserve dependence of the commercial banks upon the regional institutions. The deposits on the books of the regional banks are the reserves of the commercial banks. Inasmuch as the deposits of the regional banks are themselves expansible and contractile, the deposits of member banks, which would be elastic even if their reserve foundation were *in*elastic, now have an elasticity raised to the second power.

Moreover, the elasticity of both the deposits of the regional banks and of the members are buttressed and supported by the Federal Reserve note-issue provisions. Under the old national banking system an expansion of loans and a consequent expansion of deposits in the banking system was ordinarily accompanied by a rising physical volume of trade and rising prices. The growth in business transactions, coupled with higher prices, impelled men to carry more money in their pockets and merchants more money in their tills. But the swelling of pocket and till money involved a withdrawal of cash from the commercial banks. As money left the banks, their lending power was curtailed, and expansion of credits and rising prices were brought to a halt.

Under the operation of the Federal Reserve Act an expansion of loans and a consequent expansion of deposits, accompanied by rising prices and expanding physical volume of trade, also impel men to carry more "money" in their pockets and merchants, more in their tills. Since 1914, however, the demand for additional pocket and till money has been met by the issue of *promises* of the Federal Reserve Banks to pay money. Lawful money is no longer lost by commercial banks. Instead it is held by the Federal Reserve Banks as a foundation on which is reared a three-fold credit structure: (1) deposits of Federal Reserve Banks; (2) deposits of member banks and (3) Federal Reserve notes.

The control of credit under our Federal Reserve System, therefore, becomes a matter of greater importance than under the old régime. Formerly an automatic check was imposed on credit expansion before extreme limits were reached. Today, in the absence of that automatic check,

we are to depend upon regulation of the rediscount rate as a chief means of control.

A Member Bank Cannot Make Manifold Loans

Now the effectiveness of the rediscount rate as an instrument of controlling bank loans and, therefore, deposits, hinges on the relation between the amount borrowed by a member bank and the amount that the same bank is able to lend as a result. If a member bank is able to lend five dollars on the basis of one dollar borrowed, it is evident that the borrowing bank would be willing and able ordinarily to pay more than 4 or 6 per cent for borrowed funds. On the other hand, if the borrowing bank is able to lend only dollar for dollar on the basis of borrowed funds, that bank will not ordinarily pay a higher rate of rediscount than it receives at its counter. What are the facts at this point?

It would at first appear that a borrowing bank would be able to make manifold loans on the basis of borrowed reserve. Does not the balance sheet of a typical national bank show loans (and deposits) equal to several times its reserve? If reserves of $100,000 support loans of $1,000,000 (and deposits of the same approximate amount), would not the acquisition of additional reserves of $100,000 enable the bank to support total loans of $2,000,000?

Normally, the bank that attempted to increase its loans by $1,000,000 on the basis of $100,000 new reserve would quickly be face to face with the problem of how to meet unfavorable clearing balances of large proportions. The borrowers of the $1,000,000, leaving the proceeds of their loans on deposit, would draw checks against their bank balances for most of the $1,000,000; those checks would be sent far and wide to creditors and, returning to the bank in question, would be paid in cash or its equivalent. It is true that some of the checks drawn by borrowers would be sent to creditors who were depositors in the drawers' bank; in that event there would be no immediate corresponding loss of cash by the lending of the bank. It is also true that some borrowers would not withdraw all the funds borrowed. If due allowance is made for these two considerations, we may conclude that for every dollar that a typical American bank lends, it loses not less than eighty cents through direct cash withdrawals by borrowers and through unfavorable clearing balances.[1] In other words, the typical banker is able to lend approximately $1.25 for each $1.00 borrowed. It follows that rediscount rates roughly equal to the market rates (if the expense of carrying on the banking business is considered) will ordinarily be sufficiently high to serve as a check on borrowing by member banks.

Borrowed Reserve Supports Manifold Loans in the Banking System

It may be added that borrowed reserve normally does become the foundation of manifold loans *in the banking system*. Bank A borrows $100,000 from the Federal Reserve Bank and in turn lends $125,000, more or less, to customers. The borrowing customers draw checks against their replenished balances and those checks are remitted to creditors. The creditors deposit the checks in their own banks. When the checks are cleared and collected, not only will the drawee bank lose approximately $100,000 but other banks—banks B, we may say for

[1] For a more nearly accurate and more detailed statement see the writer's *Bank Credit*, The Macmillan Company, New York, 1921, Chapter III.

convenience—will have gained that amount in deposits, and a corresponding amount in reserve. The lending officers of banks B, mindful of the fact that a reserve must be held against the newly acquired deposit liabilities as well as against any deposits arising from additional loans made on the basis of the reserve freshly acquired, will be constrained to add to their loans not $1.25 for each dollar deposited, but, approximately $1.10.

If banks B now lend $110,000 on the basis of $100,000 newly lodged in those banks, they will *tend* to lose to other banks—banks C—approximately 80 per cent of the amount loaned, or $88,000; the $12,000 left in banks C, may be regarded as reserve against the $100,000 in deposit liabilities growing out of the lodgment of that amount of checks drawn on bank A and against additional deposits growing out of the $110,000 in loans. Banks C, having acquired $88,000, are in a position to lend approximately $96,800 ($1.10 for each dollar of deposited reserve). If 80 per cent of their loans are lost to other banks, banks C would lose $77,440 and retain $10,560 ($88,000 − $77,440) as reserve against $88,000 in deposit liabilities arising from the lodgment of that amount of checks drawn on banks B and against additional deposits growing out of the $96,800 in loans.

This chain of operations continues until the original $100,000 becomes very widely distributed and the total loan expansion results in deposits sufficient to cover or absorb the borrowed reserve.

Can a Bank Make Manifold Loans During Period of Loan Expansion?

At this point a crucial question arises. If all banks within a credit area were expanding their loans at the same rate, would it not be possible for individual banks to make a severalfold loan expansion, consequent upon a reserve acquisition, without losing cash through unfavorable clearing balances, thereby rendering control of credit expansion possible only by raising the rate of rediscount unprecedentedly?

If the First National Bank of Dayton, Ohio, borrows $100,000 from the Federal Reserve Bank of Cleveland at a time when other banks in the same credit area are likewise borrowing, and all expand their loans in such a manner that what each would normally lose in reserve is met and offset by streams of funds coming from other banks, the First National Bank of Dayton would be able to lend several dollars for each dollar borrowed, even if allowance is made for the likelihood that the proceeds of loans secured from the regional bank at Cleveland would be taken partly in Federal Reserve notes. Under these conditions, with the bank in question able to lend four or five dollars to each dollar borrowed, it has often been contended that a rate of rediscount that fell appreciably short of being four or five times the rate of discount or market rate would not be effective. That the contention is ill-founded may easily be shown.

When all banks in a given credit area are expanding their loans, the additional lending power of each is traceable to *two* quite different facts or forces. The first is the fund *borrowed* by the commercial or member bank, and the second is the fund or funds that such a bank receives through deposit channels and as a result of the lending operations of other banks. The point to be stressed is that what a member bank borrows does not determine the amount that it will receive in deposits that arise out of the lending operations of other banks. If within a

credit area where all member banks are borrowing and expanding their loans, one institution suddenly ceases to borrow, the stream of increasing deposits flowing from the expanding banks will tend to continue to swell the deposits and, therefore, the lending power of the bank that has ceased to borrow. A resumption of borrowing by the exceptional bank will enhance the lending power of that bank by an amount only slightly in excess of the amount borrowed.

A clear cut distinction must be drawn in banking between lending power that owes its existence to funds borrowed by a given bank and lending power that owes its existence to reserve acquired as a consequence of expanding loans on the part of *other* banks. When that distinction is clearly drawn the persistent contention referred to loses its semblance of validity.

Having seen on what grounds of sound theory the control of bank credit, *i.e.*, loans and deposits, rest, we may now be permitted briefly to examine the question whether the rediscount rate ought to be higher or lower than the market rate.

Control of Bank Credit Through the Rediscount Rate

The rediscount policy of the Federal Reserve Board has gone counter to that of the great central banks of Europe, notably the Bank of England, the European policy having been to maintain the rediscount rate above the market rate.

Numerous guides have been followed by the directorate of the Bank of England in the determination of the bank rate: the reserve ratio, the state of trade, international gold movements and the market rate. Likewise, our Federal Reserve Board has also been governed by no single factor. While the state of trade, the reserve ratio, the fiscal needs of the government, etc., have all received attention, the writer believes that too little effort has been made to bring the market rate into harmony with what may be called the *natural* rate of interest, the natural rate being the rate at which the supply of and demand for loanable capital goods, as distinct from "money," may be equated.

Although it is impossible always accurately to ascertain what the natural rate of interest is, it is not difficult to detect a wide disparity between the market and natural rates. The disparity between the market and the natural rates during the early period of credit expansion under the operation of the Federal Reserve Act, was due measurably to an inflationistic policy with a low rate of rediscount as its central feature. With a low rate of rediscount obtaining, our market rates were low and general prices rose in conjunction with an expansion of loans and deposits. Rising prices gave birth to rising profits, and the predictable increased demand for funds, with a consequent extreme rise in the market rate of interest, was soon in evidence. In a country like the United States where capital is highly productive and preference for present goods over future is pronounced, cheap money can be had only by making everything else dear; depression of interest rates engenders credit expansion and rising prices. Indeed, the price level is itself an index of the relation of the market to the natural rate when allowance is made for the changing phases of the business cycle.

Our extreme and recurrent expansion and contraction in industry and trade can be avoided, not by keeping the rate of rediscount invariably above the market rate, but by keeping it distinctly above the market rate during periods of expansion and less markedly so, or

even below the market rate, during periods of crisis and depression. Let the brakes of high rediscount rates be set early, long before the bottom of the hill is reached; and let the accelerating force of low rates be applied with similar promptness and decision. If the market rate is kept in harmony with the natural rate, violent changes in the general price level can scarcely occur.

Agricultural and Commercial Loans

A Comparison of Loans Made in a Great Agricultural State with Loans to the Largest Bank and to Member Banks in the Largest City in the Seventh Federal Reserve District

By J. B. McDougal
Governor, Federal Reserve Bank of Chicago

It would be too much to expect the general public to have more than a casual comprehension of banking or of the relations of the Federal Reserve Banks to other banks or to business. It is not expected that the public will understand the operations of a factory which makes electrical machinery or of the electrical machines that are made. Still any well informed man may know in a general way what a dynamo is and have a grasp of what is meant by horse power. So might he know that a bank in a great central city probably generates a large horse power in credit and that comparison of the operations of such a bank with those of any smaller bank can be valuable or informative only if relative size is considered.

In this country there are banks of all kinds and sizes. The customary method of grading banks is by "capital and surplus," and "deposits." It takes 40 banks with $25,000 capital each to measure up in capitalization to one with $1,000,000. It takes 400 such banks to equal a $10,000,000 institution. If the comparative figures are carried far enough, and total resources are used as the basis, it will be found that there are single banks in New York and Chicago with resources larger than the combined resources of all member banks in certain individual states or perhaps in several states.

These large banks have as customers many small banks, as well as individuals and corporations. When borrowing from the Federal Reserve Banks, their transactions are usually in large amounts. It is natural that what is considered moderate borrowing for a large bank should appear extravagant when compared with the amount borrowed by a small bank. A loan of fifty million dollars appears very large when compared with one of fifty thousand. Relatively, however, fifty millions may be much more moderate than fifty thousand, if due consideration is given the respective reserve balances maintained with the Federal Reserve Bank by the institutions involved.

For instance, an officer of a country bank called at the Reserve Bank one day and asked for an additional loan. At the time his bank had become so extended that its excessive borrowings had been the subject of considerable correspondence. He was told that a definite limit must be placed on his borrowings at a point not far from the amount already borrowed. The country banker was piqued. He called at-

tention to the many millions loaned to some of the Chicago banks. The country bank's debt was less than two hundred thousand. A comparison was made at once. It was found that on the basis of reserve deposits the big banks might have owed the Federal Reserve Bank nearly three times as many millions if they had borrowed in the same proportion as the small bank.

A part, at least, of the criticism of the operations of the Reserve Banks during the recent trying times seems to be based on instances of similar misconception of facts and figures. A moderate borrowing by a large bank may appear out of proportion when compared to an actually excessive borrowing by a small bank, if only absolute figures are used.

In connection with the work of the Joint Committee on Agricultural Inquiry, which was instructed to "investigate . . . the banking and financial resources and credits of the country, especially as affecting agricultural credits," the Federal Reserve Bank of Chicago made a careful study of its loans to member banks. The purpose was to ascertain if there had been any discrimination, real or apparent, against banks serving agricultural communities.

Section 4 of the Federal Reserve Act was kept in mind. This section, in outlining the duties of directors of Federal Reserve Banks, provides as follows:

> Said board shall administer the affairs of said bank fairly and impartially and without discrimination in favor of or against any member bank or banks and shall, subject to the provisions of law and the orders of the Federal Reserve Board, extend to each member bank such discounts, advancements and accommodations as may be safely and reasonably made with due regard for the claims and demands of other member banks.

The study developed some interesting facts that are pertinent to this discussion. The loan records of commercial banks are not kept in such form that borrowers can be classified by occupations in any comprehensive way. It is true that for some time past Federal Reserve Banks have required member banks in their applications for rediscount to specify the business of customers whose notes are offered. But this information provides no adequate measure of the extent of the service rendered to agriculture. It is well known that many country banks make a practice of using their farmers' paper for rediscount only after exhausting their supply of other eligible paper which is presumably better known at the Federal Reserve Bank, such as, "commercial paper" and notes secured by United States government obligations.

No statistics are available to show the absolute amounts loaned to various industries, but the Federal Reserve Bank of Chicago was able, by a comparison of its loans to member banks, to obtain conclusive evidence that it had not discriminated against agriculture. Loans to and reserve deposits of member banks in a preëminently agricultural state were compared with similar figures for member banks in the other states as well as the largest cities in the district.

One of the tabulations made is printed in full on page 201 and presents an interesting comparison of the relative borrowings by all member banks in the preëminently agricultural state with all member banks in the city of Chicago and with the individual bank whose borrowings exceeded those of any other bank in the Federal Reserve District.

The table on page 201 includes percentages, showing the ratio of amounts borrowed to reserve deposits kept in the Federal Reserve Bank, a method

LOANS TO ALL MEMBER BANKS IN A GREAT AGRICULTURAL STATE COMPARED WITH LOANS TO THE LARGEST BORROWING BANK IN THE SEVENTH FEDERAL RESERVE DISTRICT AND LOANS TO ALL MEMBER BANKS IN THE CITY OF CHICAGO; ALSO, COMPARATIVE RESERVE DEPOSIT FIGURES.

(In thousands of dollars)

		All member banks in Agricultural State	Largest borrowing bank in the District	All member banks in Chicago
July 2, 1920	*Reserve Deposit	21,000.	32,000.	135,000.
	Loans	63,000.	80,000.	252,000.
	Per cent loans to reserve deposit	300.	250.	186.6
October 2, 1920.	*Reserve Deposit	21,000.	31,000.	133,000.
	Loans	78,000.	78,000.	250,000.
	Per cent loans to reserve deposit	371.4	251.6	187.9
January 5, 1921.	*Reserve Deposit	20,000.	30,000.	130,000.
	Loans	94,000.	70,000.	187,000.
	Per cent loans to reserve deposit	470.	233.3	143.8
April 2, 1921 ...	*Reserve Deposit	20,000.	28,000.	121,000.
	Loans	75,000.	71,000.	188,000.
	Per cent loans to reserve deposit	375.	253.5	155.3
July 1, 1921	*Reserve Deposit	18,000.	29,000.	123,000.
	Loans	64,000.	33,000.	128,000.
	Per cent loans to reserve deposit	355.5	113 7	104.0
October 1, 1921.	*Reserve Deposit	18,000.	32,000.	127,000.
	Loans	62,000.	7,000.	51,000.
	Per cent loans to reserve deposit	344.4	21.9	40.1

* Average for month.

of comparing accommodations granted which is familiar to all bankers. The figures are given at intervals of three months and cover the period of greatest expansion of credit in the United States. It is worthy of note that the total borrowings for all member banks in the agricultural state were on one day nearly five times their total reserve deposits, while the total borrowings of the largest borrowing bank in the Federal Reserve District at the peak were about two and one-half times its reserve deposit. It is also interesting to note that while on October 1, 1921, the largest borrowing bank in the Federal Reserve District was indebteded to the Federal Reserve Bank to the extent of only 22 per cent of its reserve deposit, the total borrowings for all member banks in the agricultural state on the same date were 344 per cent of their total reserve deposits.

It will also be noted from the chart on page 202 showing these percentages,

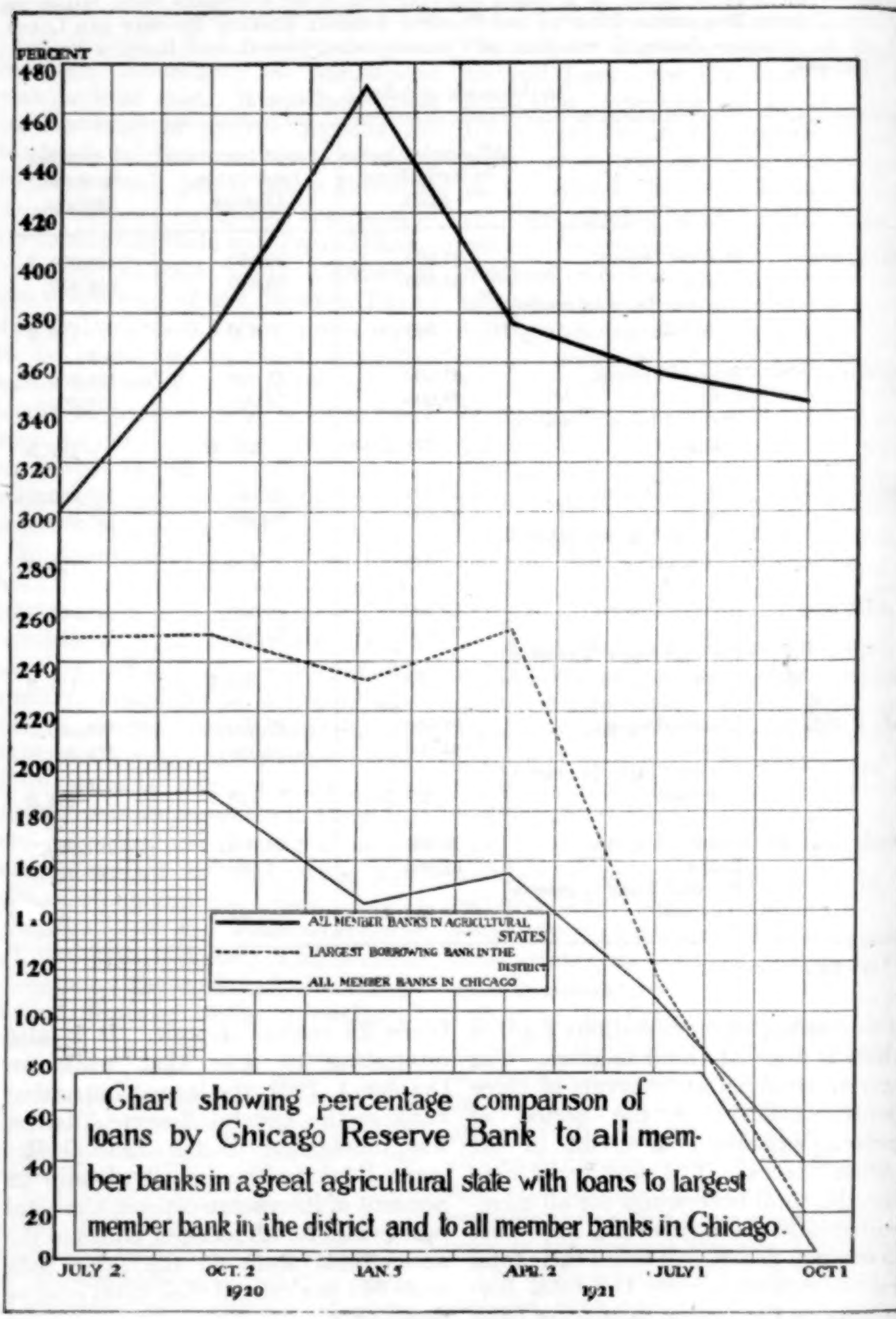

Chart showing percentage comparison of loans by Chicago Reserve Bank to all member banks in a great agricultural state with loans to largest member bank in the district and to all member banks in Chicago.

that since April 2, 1921, there has been great decrease in the amounts owed by the city banks, while the curve for the agricultural state does not show a proportionate decline.

This examination of actual figures makes clear two points: (1) There was no discrimination against agriculture by the Chicago Reserve Bank. Member banks in cities were not favored. (2) Relative, rather than absolute, figures must be used if an accurate idea of the situation is to be had.

Popular and Unpopular Activities of the Federal Reserve Board and the Federal Reserve Banks

By William A. Scott
University of Wisconsin

On account of the extraordinary conditions under which our Federal Reserve System has been obliged to operate, public opinion towards it has taken peculiar twists and turns. Hopefulness, uncertainty and lack of enthusiasm characterized it at the start, a condition easily explainable by the party controversy which preceded its establishment, differences of opinion regarding the details of the law governing it and conflicts of interest among the people most directly affected by it. Those who had fought and bled for the Aldrich plan were naturally critical of this one and uncertain regarding the manner in which it would work. The state bankers, generally, were hostile towards it because they feared that some of their sources of profits would be jeopardized, and many national bankers did not like its coercive features. The undiscriminating public undoubtedly hoped that it would succeed and was disposed to give it a fair trial.

The outbreak of the European War, three months before the Federal Reserve Banks were ready to begin operations, cleared the atmosphere and smoothed the pathway for them so far as public opinion was concerned, though in other respects it complicated their problems. The financial difficulties which speedily followed made most people thankful for their existence and created a feeling of dependence upon them. No one was disposed to hamper them by criticism.

Before our entrance into the War, their activities do not seem to have attracted public attention to an extent sufficient to arouse either its criticism or its approval. The policy developed during this period of concentrating in their vaults as large a part of the rapidly increasing gold supply as possible by exchanging their notes with the banks for gold, important though it was in checking somewhat the rapidly expanding bank credits and in rendering this mass of the precious metal easily available for any purpose for which it might be needed, seemed to excite curiosity rather than interest.

War Compulsions

With our entrance into the War in April, 1917, the Federal Reserve Banks were called upon to assist the Treasury in its colossal financial operations. As financial agents of the government, they performed the work of executing its plans and measures and, what is more important, so long as the War lasted and for some time thereafter,

their policies were shaped primarily with reference to the government's needs and interests.

The greatest of these was the flotation of billions of bonds and short time notes, and the Reserve Banks' part in the work was to act as the government's agents in the sale of these securities and to aid in creating a market for them. To this end they established discount rates considerably below the market with a differential in favor of loans on the security of government bonds and notes, rates low enough, in fact, to make it possible, with the aid of rediscounts, for member banks to loan without loss to bond buyers at rates not higher than the bonds and notes themselves yielded.

There can be no doubt that this was a violation of the rules of sound commercial banking. It opened the doors to the inflation of bank credit and to the evils which follow in its train. Conscious though they were of this fact, the Federal Reserve Banks and the Federal Reserve Board were forced to adopt this policy. The Liberty loans could not otherwise have been floated. Without borrowing from their banks, the people could not have purchased their necessary allotment of bonds, and the banks could not have made these loans unless the Federal Reserve Banks had rediscounted for them on the security of these loans at rates which did not involve loss. Had the Reserve Banks refused to adopt this policy, public opinion would certainly have condemned them and probably Congress would have forced them to it.

Responsibility for the Rise and Fall of Prices

One of the penalties that had ultimately to be paid for this violation of sound banking principles was misunderstanding and criticism, not criticism of this policy, which had the hearty and even enthusiastic endorsement of public opinion, but criticism of the measures the Federal Reserve Banks had ultimately to adopt in order to save themselves and the credit system of the country from the consequences of this policy.

This misunderstanding and criticism resulted from the contemporaneous expansion of bank credits and the rise of prices. Both were necessary results of the same causes, namely, the readjustments in the relations between the demand and supply of important groups of commodities and the transfer on a large scale of demand operations from private individuals and corporations to the government. But the people, with the assistance of a group of economists, interpreted the causal relations differently. They insisted that the expansion of bank credits was the cause of the rising prices, and, since the discount policy of the Federal Reserve Banks was held to be chiefly if not wholly responsible for the inflation, these banks were held responsible for the high prices.

This theory aroused no widespread criticism of the Federal Reserve Banks so long as prices continued to rise and prosperity to be general, but, when the high price period came to an end and the opposite movement got under way, the belief that the Federal Reserve Banks and the Federal Reserve Board could greatly influence and perhaps control price movements subjected them to pressure from people who were being, or thought they were being, injured by the slump in prices and, when the banks did not yield to this pressure, to the severe criticism of these people.

The course of events which resulted in such pressure and criticism seems to have been about as follows: The Armistice was succeeded by about a year and a half of booming business, accom-

panied by extravagance, speculation and soaring prices. Bank credits, including those of the Federal Reserve System, expanded rapidly, and bank reserves rapidly declined. Towards the end of 1919 ordinary prudence and a decent regard for the safety of our credit system demanded that a halt be called. The Federal Reserve Board and the responsible officers of the Federal Reserve Banks felt and knew that good banking policy would have required them to put on the breaks much earlier, but they were stopped by the financial exigencies of the government whose need for floating large loans did not end with the Armistice. The government needed the aid of the Federal Reserve Banks quite as much as during the War.

During the year 1919 the Federal Reserve Banks and the Federal Reserve Board tried in vain to moderate the pace of the member banks by moral suasion and other indirect methods and it was not until December of that year that the financial condition of the government freed their hands to such an extent that they felt free to apply the brake of increasing discount rates.

The upward movement of prices came to an end in the early summer of 1920 and the slump that followed synchronized very closely with the period of high discount rates at the Federal Reserve Banks. The pressure upon the banks to carry people who were in trouble on account of the rapidly shrinking value of inventories, and farmers whose crops could either not be marketed at all or at prices much below the cost of production, was very great. The Federal Reserve Banks and the Federal Reserve Board urged the member banks to extend all possible assistance to these distressed people and supported them in this policy by liberal rediscounts, with the result that the total loans and discounts of the banks continued to increase for several months after the slump in prices started and did not show any tendency to decline until near the end of the year 1920. The demand for bank accommodations was so great as to keep rates at a high level and to make excessive rates possible in individual cases.

PRESSURE FOR LOWER REDISCOUNT RATES

In times of financial distress people always search for an explanation in the hope of finding some means of relief, and, in this case, the process of reasoning outlined above, running from Federal Reserve Bank discount rates through general bank credits to prices, seemed to furnish the key and also to suggest a remedy. Proof that low discount rates result in expanding bank credits and rising prices and high discount rates in contraction of credits and falling prices, seemed to be at hand in the fact, easy to establish by statistics and graphs, that prices did rise during the period of low discount rates and began to fall soon after the policy of higher discount rates was inaugurated. The remedy seemed clearly to be a radical cut in discount rates, which, it was claimed, would result in the expansion of credits or, at least, in preventing contraction and in a check on the price slump and, if continued, in an upward movement of prices.

The spokesmen of the distressed classes in the community deluged the Federal Reserve Board with appeals for this kind of relief and, upon its refusal to grant it, with criticism and, in some instances, even with abuse. The Board was clearly between the devil and the deep sea. There was no question about the necessity for high discount rates and the removal of the differential in favor of government paper-secured loans if the credit system of the country was to be kept in a

sound condition; but it was equally clear on the other hand that that policy was unpopular.

RECENT CRITICISMS OF RESERVE BOARD POLICY

The old saw that misfortunes never come singly proved true in this case. At this truly critical time the Federal Reserve Board was publicly attacked in newspapers and before Congress. Beside the abolition of the progressive rates in force in four of the districts and a general cutting of discount rates, it is not easy to determine precisely what these critics wanted the Board to do, but one demand seems to have been for it to undertake the task of cleaning up all the dirty places in our banking system even to the extent of correcting the bad practices of individual bankers. Through the examinations conducted by the Controller of the Currency a number of these had been discovered or at least it was so thought. It was also demanded that the Board use its influence with the Federal Reserve Banks to force or to induce them to refuse to grant credit to member banks that were not playing the banking game in the manner in which the critics thought it ought to be played.

In the course of this campaign of criticism, a number of charges were brought against the Federal Reserve Board and the Federal Reserve Banks, especially that of New York City. The chief of these were: that the Board is suffering from "bureaumania" and is unsympathetic, governing itself by general rules which it refuses to relax in individual cases which are thought to appeal to the sympathy of its members; that it is extravagant, sanctioning too high salaries and other unnecessary expenditures; that it has permitted an inequitable distribution of credit, Wall Street being favored and the farmers pinched; that it refused to abandon the progressive rate policy or even greatly to modify it when cases of what were regarded by the critics as excessive rates were brought to its attention, and that it refused to reverse its rate policy when the harm being wrought by the slump in prices became apparent.

In support of these charges, the critics indulged in fallacious reasoning, misuse of statistics and the familiar tricks of the political stump speaker. They frequently disregarded those parts of the Federal Reserve Act which determined the distribution of powers and duties between the Federal Reserve Banks and the Federal Reserve Board, or put an interpretation upon them which varied from that made by the Board. In matters of this kind there is often room for differences of opinion, but the critical energy was moved by the assumption that the Board was wrong and refused to conform to the judgment of a superior wisdom.

Apparently the critical force had no conception of the consequences that would follow the Board's failure strictly to follow general rules of action impartially applied. Even if the laws under which it operates gave it the right so to do, the attempt to deal with the cases of individual bankers or of individual borrowers would soon swamp it with an unmanageable mass of detail and render impossible the execution of any policy however necessary or desirable.

The favorite method of proving that Wall Street was being favored and the farmers pinched was to quote statistics that show that the Federal Reserve Bank of New York was loaning at one time to one member bank, or to a few large member banks, more than certain other Reserve Banks in the agricultural sections were loaning to large numbers or to all their member banks. That it is necessary to observe the relation between the amount of the real credit needs of all the constituents of each

Federal Reserve Bank and the total amount of loans in each case before such statistical comparisons can have any significance, either never occurred to the critics or they chose to ignore the fact in order to make an effect on their audience. Moreover, these facts were not emphasized: That Reserve Banks in the farming country borrowed from other Reserve Banks, usually in the East, or that large banks in centers like Chicago ran up their indebtedness at the Federal Reserve Banks, in part if not chiefly, to help their correspondents located in agricultural sections.

Much was also made of the fact that some member banks in the New York district, rediscounting heavily at the Federal Reserve Bank, were themselves loaning heavily to speculative customers, without attempting to show what was the proportion of such loans to the total in each case or how cutting down the lines of discount of these banks at the Federal Reserve Bank would have affected their constituents as a whole; or without even debating the question whether it would be good policy for the Federal Reserve Bank in New York to refuse to rediscount good, eligible paper for a bank on the ground that it disapproves some of its loans.

The opponents of Reserve Board policy appear to believe that the Federal Reserve Bank of New York and the Federal Reserve Board are guilty of sins of omission or of commission relative to the New York call loan market. They argue that high rates on that market attract funds from other parts of the country which ought to be loaned at home and otherwise would be. Just how they would use the Federal System to prevent this they nowhere make clear. Perhaps they would have the Federal Reserve Bank of New York refuse to rediscount for a bank that loans on the call market!

With almost hysterical enthusiasm were cited the cases of a little bank in Alabama and a few others in which the application of the progressive rate rule had resulted in very high rates on a few loans. These were exploited to the limit in public addresses. The members of the Reserve Board probably disliked these extreme results of the progressive principle quite as much as anyone else, but they stubbornly thought out their own remedy. They recommended a rebate of the excessive interest payments in these cases and the deferring of final judgment on the principle itself until wider experience should give them more light. The critics had their own notions, however, and one was to play upon the feelings and prejudices of their audiences through the use of these extreme cases.

The refusal of the Board to lower discount rates when the slump in prices occurred was classed as "unpardonable." The arguments disclosed complete unconsciousness of the fact that there was room for differences of opinion regarding the best policy to pursue at that time or of the reasons for the Board's refusal. The Board's action could only be accounted for on the ground of "inertia" or "inability to comprehend the meaning of events."

DISCRIMINATION AGAINST THE FARMER

The criticism that the Federal Reserve System has discriminated against the farmers seems to have been endorsed by a good many people in agricultural sections, especially in the South and some parts of the West where farmers have been especially hard pressed by the slump in prices. The real credit needs of these farmers have been very great and their desire for credit in many cases has been in excess of their needs, since they wanted loans to enable them to hold their crops for cost-of-production-plus-profits prices for the

realization of which there were no real prospects. In many cases, doubtless, these needs and desires have not been satisfied and the Federal Reserve Banks, or the Federal Reserve Board, or both, have been held responsible for the failure. Why?

The testimony of Governors Harding, Strong and others before the Joint Commission of Agricultural Inquiry clearly shows that the Federal Reserve System has not been at fault in this matter; that, on the contrary, the resources of this System have been put at the disposal of member banks in the agricultural sections without stint and that member banks have been urged to respond to the farmers' needs to the fullest extent possible. There is no evidence that rediscounts of eligible paper have been refused member banks in these sections, but, on the contrary, the evidence shows that the Federal Reserve Banks in these regions have borrowed heavily from other Federal Reserve Banks and stretched the eligibility rules to the limit in order to accommodate such banks. There is also abundant evidence that member banks have taken advantage of these privileges and as a whole have responded liberally to the farmers' needs. Their rediscounts and loans have expanded rapidly since the slump in prices began, the former passing far beyond the normal lines of credit set for them by the regulations of the Federal Reserve Banks, and in many cases member banks have gone beyond the limits set by sound practice in order to accommodate their farmer customers.

Limitations of Commercial Banking

The explanation of the farmers' criticisms must be sought in a misunderstanding of the limitations of our commercial banking system, on the one hand, and of our Federal Reserve System, on the other. These critics do not know that the chief stock-in-trade of commercial banks is short time self-liquidating paper, that the amount of any other kind of paper they should carry is strictly limited and that, if they go beyond this limit, they get themselves and everybody else into trouble. Nor do these critics realize that a large part of their own paper in normal times, and most of what they have to offer in these critical times, is not of the short term self-liquidating kind. It is unfortunate that we do not have institutions especially fitted to satisfy these credit needs, but the fact is that we have not. Our banking system is defective at this point, but from this fact it does not follow that it would be good policy, or any advantage, even to the farmer, to wreck our commercial banks in an effort to do what they are unfitted to do.

Neither do these farmer critics seem to know that a Federal Reserve Bank can serve them only through a member bank and then only by means of rediscounting eligible paper. If the member bank with which the farmer deals does not have eligible paper or is unwilling to offer it for rediscount, the Federal Reserve Bank can do nothing.

Misguided Opposition

The farmer has also misunderstood the operation of high rediscount rates, especially those of the progressive variety. He has thought that these rates have prevented rediscounts by his bank and in this way have made it impossible for his banker to accommodate him. In some cases, doubtless, he has been given this impression by the banker himself who has preferred "passing the buck" to the Federal Reserve Bank to giving his customer the true reason for his unwillingness to accommodate him. That rediscounts in agricultural sections have not been prevented by high rediscount rates is

shown by the facts. The rediscount item has increased in spite of these rates. What these high rates were intended to accomplish and what they evidently did accomplish, was to force more careful discrimination between real and unreal and between greater and lesser needs and to cut down the volume of speculation.

Farmers have also been infected by the theory that the so-called deflation policy of the Federal Reserve Banks caused the slump in prices.

Public Support or Class Control

No one would be so rash as to claim infallibility for the Federal Reserve Board or for the responsible officers of the Federal Reserve Banks, least of all these persons themselves. It would be strange if they had not made mistakes. They have had to conduct a new institution during a period in which conditions were excessively abnormal and in which principles and rules of action, seemingly well established by experience, were clearly inapplicable. They have had to blaze new trails and to settle new problems upon which very little light was thrown by past experiences here or in other countries. But no fair-minded person can read and digest the testimony of Governors Harding, Strong, Miller and others before the Joint Commission of Agricultural Inquiry and escape the conviction that every policy they adopted was carefully thought out in the light of the actual conditions confronting them, that these policies worked on the whole extremely well and in the best interests of the country, that these men are able and conscientious and know their business and that the country was very fortunate to have the operation of the Federal Reserve System in their hands during this extremely critical period in its history.

The unfortunate thing is that few of the fair-minded people of the country can or will read that testimony. The ordinary man knows little about banking and would find it difficult to understand discussions regarding it if he did read them. Public opinion regarding such matters is not formed by careful reflection and weighing of the facts. Large numbers of people are bound to be influenced and to have their opinions determined by such criticisms as have been made. Since the charter period of the Federal Reserve Banks extends for several more years, the effect of this misguiding of the public mind and feeling is likely to be demands upon Congress for modifications of the Federal Reserve System in the direction of making it subservient to special interests and attempts to put the system in the control of men who will use it in the promotion of such interests. It is time for the friends of sound banking to be on the alert.

The Development of an Open Market for Commercial Paper

By E. E. Agger
Columbia University

It is the function of an open discount market to promote mobility, elasticity and maximum economy in the use of credit. Mobility is assured through the free sale and purchase of bills and paper acceptable as a basis of dealing in the market. Where pressure is felt bills are offered for sale and the result-

ing funds relieve the pressure. The funds are offered by those districts where temporary abundance prevails, and where, therefore, a profitable employment of the surplus is sought. Thus, through the instrumentality of the discount market, funds are transferred from places where they are wanted less to places where they are wanted more. This is the essence of credit mobility. Just as an open discount market promotes mobility of credit it also promotes elasticity, namely, expansion and contraction in response to changing demand. An increase in demand is indicated by a growing abundance of paper offered in the market. A decrease in demand is likewise reflected in the liquidation of maturing paper, and in the diminution in the volume of new paper flowing into the market and offered for sale. The more abundant offering of new paper tends to lead to credit expansion, while the liquidation of that which matures, and which is not offset by a corresponding offer of new paper, results in contraction.

An open discount market can be developed irrespective of the system of reserve organization that may characterize a given country. Even under a system of scattered reserves, there is nothing to prevent banks and individuals in different sections of the country from buying and selling discounts from and to one another and from developing whatever market machinery may be necessary for the purpose. Yet since such operations necessarily imply large and rapid movements of funds, it is obvious that under a centralized scheme of reserves, with effective clearing machinery, the inevitable shifting of funds growing out of open market operations can be executed with least friction and delay.

Moreover, under a centralized system of reserves an open discount market contributes toward economy of operation of the credit system because, by promoting the free flow of funds, it permits the full utilization of available credit in the market before further expansion by the central institution becomes necessary. If pressure develops in any area, through the facilities of the open market the surpluses of other areas can immediately be drawn upon without initial resort to the reserve holding agency. With an open discount market the free credit tends to be completely absorbed before the central reserve agency is called upon for the expansion that usually implies a weakening of basic reserves.

Lastly, it may be said that an open market may also be serviceable in the international flow of credit and in the safeguarding of the domestic reserve situation. If the market is sufficiently well established, and if the dealings in it are of a nature and a scope to engender the necessary confidence, the foreigner may be induced to enter in it and to invest in its wares such surplus funds, temporarily available, as he can command. As demand increases and as rates of discount rise, larger and larger sums may be attracted from abroad. This tends favorably to affect the exchange rates and may obviate the necessity of bullion shipments.

Conditions Creating an Open Discount Market

Since an open discount market cannot create itself, it follows that the development of such a market must be contingent upon a favorable conjuncture of circumstances.

First of all, an open discount market requires forms of discountable credit instruments that will lend themselves to a free market handling. Not all credit instruments, of course, are available for open market operations. Un-

der the old national banking system, both law and practice checked the development of satisfactory open market instruments. The typical American credit instrument under that system was the single name promissory note, which, owing to the obviously personal character of the credit which it represented, was not adapted to open market operations. We had a so-called "commercial paper market," but its facilities were at the service only of large and nationally known firms. Moreover, it was a market for the first placement rather than for the free rehandling of paper. It would therefore hardly be regarded as a real discount market.

Similarly, the old commercial time draft which had been a common instrument in pre-Civil War days, degenerated, under the pressure of the cash-discount and the open-account system, into a sort of "dunning" instrument, employed, in all except a few lines, for the purpose of collecting overdue accounts. The bankers' acceptance, on the other hand, which is admirably adapted to free and rapid exchanging, was practically unlawful down to the time when provision was made for it in the Federal Reserve Act and in some state laws. Thus we had no open discount market in this country because we had no paper that could be handled in such a market.

But in addition to a satisfactory commodity to be handled in a market, it is also necessary to have prospective buyers and sellers. In other words, there must be a favorable attitude toward the market and a willingness to use its facilities on the part of those who are expected to resort to it. But in this respect, also, American banking practice had developed along different lines. We had put the emphasis on independent, highly competitive local institutions, each more or less distrustful of the rest and safeguarding its business secrets with a peculiar jealousy. The cash-discount and single-name system also tended to emphasize the direct relations between the banker and his client and was thus inimical to the development of a system which implied the free handling of paper in an open market. In general, except in their relations with their regular metropolitan correspondents, bankers did not wish to confess the need for any assistance. Hence there was a strong tendency for them to hold on to the paper that they had originally discounted. They also often objected to disclosing the rates which they originally charged, and some have accused them also of wishing to "hog" the whole interest and of being unwilling to split it with others through a process of rediscounting or reselling in an open market. However all this may be, the fact remains that our bankers were not particularly well disposed toward open discount market operations.

The Reserve System Provides an Open Market

The framers of the Federal Reserve Act thus had a task on their hands. The advantages of an open discount market were freely enough conceded, but how were they to provide the necessary technical expedients? And how lay the foundation for a favorable attitude toward such a market? In an earlier article, published in The Annals in January, 1916, the writer discussed the provisions of the Federal Reserve Act and the regulations of the Federal Reserve Board bearing on the subject of commercial paper and promulgated up to that time. The great contribution of the Act itself was a system of reserve centralization and control, the basis of a system of domestic clearings and transfers, and the legalization of

bankers' acceptances. These acceptances were at first limited to export and import transactions, but were later made applicable to domestic transactions as well. Similarly, the amount of acceptances for which a member bank might make itself liable was increased from 50 per cent to 100 per cent of its combined capital and surplus. The Board's contribution is to be found in the regulations which it has drawn up in connection with the different forms of commercial paper and in the policies which it has pursued toward encouraging the use of, and the investment in, paper acceptable for open market operations.

At the present time it may be said that Section 13 of the Reserve Act supplies the member banks with their authority to engage in the acceptance business. The acceptances which they create must have a maturity not greater than six months, exclusive of days of grace. They may grow out of transactions involving the exportation or importation of goods or out of those involving domestic shipments, but in the latter case the acceptances must be accompanied by shipping documents conveying or securing title at the time the member bank makes the acceptance, or they must be secured by warehouse receipts or other such documents conveying or securing title covering readily marketable staples. Similarly, under regulations drawn up by the Board, member banks may accept drafts or bills of exchange drawn upon them by banks or bankers abroad where the purpose is to furnish dollar exchange required by the usages of trade. Such acceptances must not, however, have more than three months' sight to run.

The total amount of acceptances for each member bank is restricted to a sum equal to one-half of its paid-up and unimpaired capital and surplus, although under general regulations the Reserve Board may authorize a member bank to accept bills growing out of exports and imports up to the full amount of its capital and surplus. There is, however, the proviso that in no event may the domestic or the dollar exchange acceptances exceed a total of fifty per cent of the member banks' capital stock and surplus. Similarly, there is a general restriction to the effect that no member bank may accept for any one person or firm to an amount greater than 10 per cent of its paid-up and unimpaired capital and surplus unless the member bank is secured either by attached documents or by some other adequate security growing out of the same transaction as the acceptance. All acceptances in these different classes which mature within three months, exclusive of days of grace, and carry the indorsement of at least one member bank, are eligible for discount at Federal Reserve Banks.

But more important still, so far as an open discount market is concerned, are the provisions of Section 14 of the Federal Reserve Act. This section authorizes Federal Reserve Banks, under regulations prescribed by the Board, to purchase and sell in the open market, at home or abroad, from or to domestic or foreign banks, firms, corporations, or individuals, cable transfers and bankers' acceptances and bills of exchange of the kinds and maturities made eligible for rediscount, with or without the indorsement of a member bank.[1]

Since nothing like an open discount market had developed in this country, it was foreseen that in trying to build one up and to win the support of the

[1] In this connection attention should be called to the fact that some of the states have also authorized their banking institutions to engage in the acceptance business.

member banks, the leadership of the Reserve Banks would have to be relied upon. This is what gives special significance to the provisions of Section 14. For the same reason much significance attaches also to the regulations of the Board bearing on the eligibility of paper for rediscount at and for open market purchases by the Reserve Banks.

In general, it may be said that paper to be eligible for discount must have grown out of a transaction involving "producing, purchasing, carrying or marketing goods in one or more of the steps" of "production, manufacture or distribution, or for the purpose of carrying or trading in bonds or notes of the United States."[2] On the other hand, it must not be paper whose proceeds are to be used for fixed investments of any kind or for other capital purposes; or paper used for speculative purposes or for lending to others. Various expedients such as statements, shipping documents, warehouse receipts, etc., are relied upon to guarantee the essential nature of the paper and to safeguard its security. For purposes of rediscount Section 13 of the Reserve Act made eligible notes, drafts and bills of exchange of certain types. But open market purchases by the Reserve Banks were limited to bankers' acceptances and bills of exchange of the kinds and maturities made eligible for rediscount by Section 13. The effect of this limitation was to rule the promissory note out of the field of open market purchases, leaving within this field bankers' acceptances, bills of exchange and so-called trade acceptances which are defined as drafts or bills of exchange "drawn by the seller or the purchaser of goods sold, and accepted by such purchaser."[3]

[2] Regulations A, Series of 1920.
[3] Regulation A, Series 1920, Section V.

The Reserve System Encourages an Open Discount Market

From the beginning the Reserve Board has done all that it could to further the development of an open discount market. It encouraged the Reserve Banks in their efforts to emphasize the importance of acceptances as investments, not only by their own purchases but also in the favorable rates that were accorded them. The Board has cordially approved the acceptance service that some of the Reserve Banks have provided for their member banks. Similarly, the Board has also dealt generously with acceptances in its regulations and decisions, although it has tried at the same time to maintain the principles laid down in the Reserve Act with respect to the fundamental character of the paper. During and immediately after the War the Board stretched a point with respect to renewal paper, but only in exceptional cases can such paper now be considered eligible.[4]

Favorable rates of discount were recognized from the outset as the strongest practical stimulant to the growth of an acceptance market. In their open market purchases the Reserve Banks, that were primarily concerned, quoted more favorable rates for acceptances than for other commercial paper and granted the same discrimination also for acceptances directly discounted for the member banks. Such preference was considered fully justified by the essential character of the paper. On the other hand, the Reserve Banks allowed the open market rates to control buying rates as largely as possible, shading the rate slightly where a strong indorse-

[4] See *Sixth Annual Report of the Federal Reserve Board* covering operations for the year 1919, page 22. *Ibid.*, page 33.

ment justified it. To induce broader purchases by member banks the Board itself recognizes that a differential rate must be maintained in favor of prime bills indorsed and rediscounted by member banks. Such differential always assures the member bank of some profit should it find it necessary or desirable to rediscount at its Reserve Bank the acceptances that it has purchased.[5]

Special Inducements to Buy Acceptances

As a further inducement to member banks to invest in acceptances, some of the Reserve Banks have maintained special lines of service. The New York Bank, for example, has for several years bought bills in the open market on member bank account. If desired, the Reserve Bank retains the paper, collects it at maturity and credits the member bank's account.[6] The Richmond Reserve Bank also buys acceptances for its member banks and allows the member bank to specify the names of the acceptors whose paper is wanted.[7] The Richmond Bank also has been buying unindorsed bills directly from the acceptors. This encourages the member bank to utilize its acceptance powers, and, at the same time, affords the Reserve Bank the opportunity of keeping well informed concerning the methods employed in the granting of acceptance credits. The Boston Bank has been making persistent efforts to cultivate investment in acceptances for secondary reserve purposes. The Cleveland and Chicago Banks report a steady broadening of the market as a result of successful missionary work with their member banks through their member bank relations department.[8]

In the development of the acceptance market it was recognized that the dealer would of necessity play an important part. It is essential to the success of the acceptance that it be quickly sold after acceptance has been effected. The dealer has been increasingly relied upon to effect a rapid distribution of the paper as it is created. Naturally, unless there is a rapid turnover in the market, the dealer may have to carry large amounts. This requires more capital than most dealers can afford, and hence some of the Reserve Banks have followed the practice of carrying a part of this load. The Banks take the paper for fifteen day periods under a re-purchase agreement, pending distribution.[9] This has made it possible for the dealers to operate continuously on a much larger scale than would otherwise be the case, and it has meant much, therefore, in the upbuilding of the market.

Extent of the Acceptance Market

The principal market into which acceptances flow is, of course, New York. This has thrown a special burden on the New York Reserve Bank, but through allotments to other Reserve Banks this burden has been distributed to some extent.[10] Purchasers of acceptances were at first only the larger banks, but today dealers have as clients in addition to many banks, corporations, firms and private individuals.[11] During the past year heavy purchases on foreign account have also been made.[12] Moreover, in some states

[5] See *Sixth Annual Report of the Federal Reserve Board* covering operations for the year 1919, page 23.

[6] Report of Federal Reserve agent, *Sixth Annual Report of the Federal Reserve Board*, page 319.

[7] *Seventh Annual Report of the Federal Reserve Board*, page 52.

[8] *Seventh Annual Report of the Federal Reserve Board*., page 52.

[9] *Ibid.*, page 51.

[10] *Ibid.*, page 51.

[11] *Ibid.*, page 50, p. 366.

[12] See Report Federal Reserve agent, New York District—*Seventh Annual Report of the Federal Reserve Board*, p. 382.

by act of legislature bankers' acceptances have been made eligible investments for savings banks and this promises a fruitful source of demand. The main development has naturally come in the larger industrial and commercial centers. The Board states that, as a rule, in the South, Southwest and certain parts of the West, member banks have only partially exercised their acceptance powers, while purchasers of acceptances are almost exclusively banks in the larger centers of these districts.[13] But it is reasonable to suppose that as time goes on the advantage of the acceptance as a liquid, short-time investment will be quite generally recognized and the scope of the market should be more nearly countrywide than it is now.

The general trend of the acceptance may be indicated by a few tables. Table I shows the acceptance liabilities of member banks at each controller's call since November, 1915.

Tables II and IIA show the Reserve

TABLE I. VOLUME OF MEMBER BANK ACCEPTANCES AS PER THE CONTROLLER'S CALL FOR THE SPECIFIED DATES[a]

(In thousands)

November 10, 1915	266
December 31, 1915	32,876
March 7, 1916	42,677
May 1, 1916	62,452
June 30, 1916	73,641
September 12, 1916	81,290
December 27, 1916	107,909
March 5, 1917	108,550
May 1, 1917	118,799
June 20, 1917	157,870
September 11, 1917	138,231
November 20, 1917	153,645
December 31, 1917	217,190
March 4, 1918	230,164
May 10, 1918	250,323
June 29, 1918	231,805
August 31, 1918	243,772
November 1, 1918	332,719
December 31, 1918	305,101
March 4, 1919	269,173
May 12, 1919	224,150
June 30, 1919	272,035
September 12, 1919	323,226
November 17, 1919	359,109
December 31, 1919	407,639
February 28, 1920	424,669
May 4, 1920	438,430
June 30, 1920	431,196
September 8, 1920	414,583
November 15, 1920	406,525
December 29, 1920	375,416
February 21, 1921	345,644
April 28, 1921	304,231
June 30, 1921	250,925

[a] Specially prepared by the Division of Analysis and Research of the Federal Reserve Board.

[13] See Report Federal Reserve agent, New York District—*Seventh Annual Report of the Federal Reserve Board*, p. 382.

TABLE II. FEDERAL RESERVE BANK DISCOUNTS AND PURCHASES OF TRADE AND BANKERS' ACCEPTANCES[b]

(*In thousands*)

Year	Discounts		Purchases in Open Market	
	Bankers	Trade	Bankers	Trade
1915	....	1,959	64,814	31
1916	....	5,212	369,762	16,333
1917	....	37,771	1,046,765	30,948
1918	19,940	187,373	1,748,503	61,036
1919	71,643	138,420	2,788,619	36,558
1920	137,162	192,157	3,143,737	74,627
1921-9 Mo.	49,810	101,129	996,851	6,687

TABLE IIA. SAME DATA BY MONTHS FOR 1920 AND 1921 TO DATE

1920	Discounts		Purchases in Open Market	
	Bankers	Trade	Bankers	Trade
January	17,226	16,520	299,746	2,706
February	28,611	11,001	296,959	3,349
March	34,534	23,383	298,459	4,901
April	28,172	15,296	240,704	6,890
May	15,254	16,541	270,498	3,739
June	9,431	13,938	261,333	24,419
July	7,069	13,457	209,296	10,168
August	5,490	14,011	247,438	12,270
September	8,103	17,160	255,858	2,131
October	10,354	19,389	280,162	1,670
November	13,275	15,143	230,832	1,008
December	9,643	16,318	252,452	1,376
Year	187,162	192,157	3,143,737	74,627
1921				
January	8,430	20,171	121,135	1,064
February	6,159	13,256	167,362	2,079
March	11,512	11,709	148,698	557
April	7,404	10,860	121,412	2,099
May	6,560	9,768	137,980	622
June	3,790	9,937	64,599	75
July	1,942	8,673	46,623	47
August	1,408	8,781	107,270	33
September	2,605	7,974	81,772	111
9 Months	69,810	101,129	996,851	6,687

[b] Specially prepared by the Division of Analysis and Research of the Federal Reserve Board.

TABLE III. BILLS BOUGHT IN OPEN MARKET*
(In Thousands of Dollars)

Federal Reserve Bank	1917	1918	1919	1920	1921 (9 mos.)
Boston	86,481	194,158	360,784	304,445	....
New York	445,307	945,498	1,211,399	1,697,330	....
Philadelphia	70,710	77,686	14,049	41,232	....
Cleveland	51,007	122,800	261,750	294,602	....
Richmond	54,759	70,766	52,977	51,712	....
Atlanta	25,388	45,477	51,661	39,576	....
Chicago	61,142	122,787	292,012	345,021	....
St. Louis	22,788	26,096	87,503	36,020	....
Minneapolis	16,397	13,903	108,714	18,060	....
Kansas City	17,561	14,691	26,086	17,173	....
Dallas	9,743	25,024	12,415	8,348	....
San Francisco	48,018	150,653	345,827	364,845	....
Totals	909,301	1,809,539	2,825,177	3,218,364	....

*Yearly returns Seventh Annual Report Federal Reserve Board, *p. 52.*

Bank discounts and purchases of bankers' and trade acceptances for indicated periods.

Table III shows the purchases in the open market by or for the account of each Federal Reserve Bank during the years 1917–1920 included and for the first nine months of the present year.

FUTURE DEVELOPMENT THROUGH BANKERS' ACCEPTANCES

It will be observed that from the spring of 1920 down to the last quarter of 1921 the volume of operations declined. This was due primarily to the great decline in our foreign trade, but the collapse at home also exerted a considerable influence. Another notable circumstance is the specially large drop in trade acceptances as contrasted with bankers' acceptances. The experience with trade acceptances has not been particularly encouraging. In nature, the trade acceptance differs diametrically from the bankers' acceptance and experience seems to prove that it lends itself to serious abuse.[14] Evils have been complained of also in connection with bankers' acceptances, but such evils can be handled through the banks more easily than trade acceptance abuses can be remedied through the more numerous and less amenable private business firms. The future development of the open market is thus likely to rest more and more completely on the bankers' acceptance, and a great impetus would be given to this development if in domestic business a credit procedure based on the bankers' acceptance were more widely employed.

[14] The Federal Reserve agent of District No. 1 in his 1920 report to the Board says: "The development of the use of trade acceptance—at least the domestic trade acceptance—unlike that of the bankers' acceptances, does not appear to have been entirely satisfactory. That they have been misused there is little question, and for the most part the banks in the district do not feel any more favorably disposed, if as much so, to encourage their use than in the past.

The Efficiency of Credit

By O. M. W. SPRAGUE
Harvard University

A GOOD irrigation system and a perfect system of credit would exhibit strikingly similar characteristics. The supply of credit, as of water, would be abundant, produced at a minimum cost, and free from interruption or exhaustion. Adequate means of distribution would be developed to furnish the water in the one case and credit in the other to every part of the territory to be served. And then, to secure good results, judgment must needs be exercised in both cases. Unintelligent and lavish use of the water will be harmful to the crops and may exhaust the most abundant sources of supply. Similarly with credit, unrestrained use has an unfavorable effect upon industrial output, stimulates a rank growth of speculation and is the principal cause of extreme fluctuations in the general level of prices. Irrigation experience also teaches that extensions and improvements in one direction may be wasteful and even positively hazardous unless they are accompanied by balancing developments in other directions. This essential requirement, if a credit system is to develop in a satisfactory fashion, is commonly overlooked. The establishment and operation of the Reserve Banks has introduced many and important changes in our banking system. Whether that development has been a well balanced development is, in my judgment, the most searching and important question raised by our credit experience during the last six years.

MORE CREDIT AT LOWER COST

An increase in the supply of credit and a reduction in basic costs are definite results of the changes in our banking arrangements brought about by the establishment and operation of the Reserve Banks. The reduction in reserve requirements for member banks and the concentration of those reserves in the Reserve Banks, where they become in turn the basis for further credit in the form of Federal Reserve notes and also of reserve balances, have greatly reduced the amount of gold or other reserve money required to support a given volume of credit. Estimates of the saving thus secured vary somewhat, but for our present purpose it is sufficient to note that all calculations agree in the conclusion that gold is now a basis for at least twice as much credit as in the period before the Reserve System was established.

A reduction in the amount of gold required to support a given volume of credit would be followed by a positive reduction in the cost of bank credit if the volume of credit was not enlarged. Less gold would then be used for banking purposes, and the surplus could be used in the arts or exported in payment for goods, services or securities. Again, insofar as additional credit might serve to increase production, a positive advantage would be derived from the reduction in reserve requirements. But manifestly the amount of additional credit that can exert a favorable influence upon production is small. A large increase in the supply of credit, if freely used, is a positive detriment to industry. Its effects are seen in rapidly advancing prices, an over-extended condition of business concerns generally, and widespread speculation, culminating in crises and followed by trade depression.

Leaving out of consideration the special case of the use of credit in financing the War, it is not easy to discover any positive gain that the country has realized from economy of gold which has been secured through the establishment of the Reserve System. So far, the results have been unfavorable. The additional credit was freely extended and we now are enduring the inevitable consequences. So far as the supply of credit is concerned, a repetition of this experience is entirely possible. Loan liquidation, always an incident of periods of depression and abnormal gold imports, is placing the banks in position to grant billions of additional credit as soon as an active demand develops.

A more certain gain from the Reserve System is the assurance that the flow of credit will not be interrupted through exhaustion of supply or by the working at cross purposes of the banks as happened in successive crises down to and including the crisis of 1907. This assurance that the flow of credit will not be interrupted in the future is not the result of the increase in the supply of credit. It could have been gained without any increase whatever in credit supply. The exhaustion of the lending power of the banks on future occasions of financial strain is altogether unlikely because the Reserve Banks recognize responsibility for the general credit situation in this regard, and regularly hold in reserve, power to extend credit on an extensive scale to be used freely in case of emergency. Through the Reserve System the banks of the country have also become closely knit together for settlement purposes, and there is therefore no longer reason to fear that they will suspend payments on future occasions of financial strain. In short, that a future crisis will degenerate into a panic is no longer one of the hazards to which the conduct of business is subject.

THE DISTRIBUTION OF CREDIT

Turning now to the distribution of credit, the Reserve System is found to have made considerable, though by no means fundamental, changes. On account of the almost complete absence of branch banking in the United States, credit is far less fluid in this country than elsewhere. The supply of credit in each community, and especially in the smaller ones, is in large measure limited to the resources of the local banks eked out by such amounts as they may choose or are able to borrow from banks in other places. Through the Reserve Banks the borrowing facilities of many local banks have been materially enlarged. But it still remains true that credit is far less fluid than in the countries where banking is conducted by banks operating regional or nation-wide systems of branches. This is the price, not necessarily too high a price, that we pay for our system of independent local banks.

It is in the employment of credit that the least change has followed the establishment of the Reserve System. Aside from certain general restrictions, each local bank, and properly, is free to employ its funds as may seem to it advisable. The Federal Reserve Act widened the scope of the lending activities of the banks somewhat by authorizing them to accept a limited range of bills of exchange and to lend a moderate amount on mortgage security. The Act also aimed at making commercial loans more attractive by excluding other loans, with the exception of those secured by United States government obligations, from rediscount at the Reserve Banks.

These changes in the law and modifications in banking practice are im-

portant, but were not expected to change materially the general character of the assets of the banks.

MORE CREDIT WITHOUT NEW USES

This, then, is the gist of the situation resulting from the establishment and operation of the Federal Reserve System: an enormous increase in the available supply of credit and no considerable new uses for this credit. No new uses for credit are needed to absorb this additional supply. The bulk of this additional credit cannot be employed with advantage to the community, but only to its positive disadvantage. Credit serves a productive purpose by facilitating the transfer of capital assets and of goods in process of production and marketing. But when business is active, and people are already fully employed, additional doses of credit do not result in a larger physical output of goods. Additional credit then subjects all industry to the unhealthful influence of protracted advance in prices. The demand for credit grows more and more intense and is practically without limit. At such times, moreover, the thousands of competing banks are quite incapable of imposing restraint upon borrowers so long as they possess unused lending power. The fear that desirable depositors will go elsewhere is strong and warps judgment. In these circumstances, cautions and warnings from the Reserve Banks have little effect; they were not heeded in 1919.

The Reserve Banks now have a reserve which is nearly 75 per cent of their demand liabilities, with prospects good for a still higher ratio before conditions become favorable for a period of renewed business activity. Rediscounts to the amount of about $3,000,000,000 could be granted and still, in the absence of gold exports,—an unlikely event—the Reserve Banks would be well within legal reserve requirements. On the basis of the credits secured through these rediscounts the commercial banks of the country would be able to extend loans by from two to three times the amount discounted. In other words, it may be conservatively estimated that there is at least ten billion dollars of unused bank credit in the United States at the present time.

THE DISCOUNT RATE AND THE PRICE LEVEL

In the Federal Reserve System we have an agency which has the power to make a vast increase in the supply of credit for the bulk of which there is only one influence that will create an intense demand. That influence is rising prices. A moderate advance in prices may indeed have a beneficial effect on production after a period of depression, but a prolonged upward swing of prices creates speculative conditions, stimulates speculative activities, and tends to bring all but the most cautious business concerns into an over-extended condition. Such a prolonged upward movement of prices with all its disastrous consequences is hardly possible without large use of the credit resources of the Reserve Banks. It would seem, therefore, that the effect of advancing prices on the general business situation should be a factor of the first importance in shaping the discount policy of the Reserve Banks, assuming more and more importance as a period of business activity continues. The management of the Reserve Banks is, however, by no means inclined to this view of the matter. Responsible officers of the banks and also members of the Federal Reserve Board roundly assert that they are not concerned with the course of prices and that in the determination

of discount policies the price situation is not a definite factor.

The attitude of the management of the Reserve Banks in regard to responsibility for the course of prices forcibly recalls an experience of the most ancient of central banks. For more than a generation, the directors of the Bank of England stoutly insisted that the Bank was no more responsible for the situation in time of crisis than any other London bank. Finally, largely as a result of repeated onslaughts by Bagehot in *The Economist*—given more permanent form in *Lombard Street*—the policy of the Bank was definitely reversed and the course that has become universal practice in handling crises was adopted.

There is unhappily little doubt that the Reserve System has lost somewhat in general public estimation during the last two years. It bears much of the burden of the consequences of the unwise low discount policy which the Treasury Department unwisely insisted must be continued for more than a year after the Armistice. The wisdom subsequently manifested in refusing to give way to demands for additional credit, which would have made a bad situation worse, could not be expected to make a strong appeal to the people at large. For the future, if not prevention, at least clear evidence that the Reserve System has not contributed to the creation of the intense activity that breeds depression is a reasonable demand on the part of the public. This expectation will not be realized if large additional supplies of credit are furnished by the Reserve Banks at times when prices are rising rapidly and persistently.

Book Department

Baldwin, D. C. *Capital Control in New York (State)*. Pp. xxiv, 225. Price, $3.00. New York: McDevitt-Wilson's Inc., 1921.

Up to a few years ago, many public utilities had the habit of claiming that "a contract was a contract," while, lately, a large part of the consuming public has been inclined to adopt the slogan as its own. But there has of late been evident a growing realization on the part of the public that while revenge may be sweet, it has its limitations as a steady diet. We can exist without the utilities, but we cannot "live" without them; not only are they indispensable to our present standard of comfort, but they are already lagging far behind our demands upon them. The utilities, on the other hand, cannot serve us without a sound basis of credit, the foundation of which is a budget which not only balances, but allows for the necessary reserve and emergency funds. The result of the harrowing experiences of the last five years is that now, after the pendulum has been allowed to swing both ways, both the utility corporations and the public have experienced a deeper realization than ever before of the mutual benefit to be derived from the proper governmental control of the issuance of securities.

In view of the more widespread realization of this fact brought about by recent events, a study of the regulation of security-issues accomplished in the State of New York is welcome at this time. New York was one of the first of our commonwealths to inaugurate effective control in this matter, and, being the wealthiest and most populous of the states, the problems involved were especially numerous and complex; in fact, the First District Commission, with jurisdiction over the city of Greater New York, had to cope with problems that were unique and without a parallel, either in this country or in Europe.

The author of this monograph has traced the growth of New York's administrative regulation of security-issues from the first crude and nominal beginnings in the early fifties of the last century to the middle of 1918, since which time little of constructive significance has been accomplished. Really effective control of securities in the State of New York dates from the going into effect of the Public Service Commissions Law (July 1, 1907). This act was fathered by Governor Hughes and its final enactment was due almost wholly to his persistent efforts. The passage of this act marked an epoch in public utility regulation. For years the control of the issuance of securities by regulative bodies had been recognized as the key to all the other aspects of utility regulation, and this act, creating the Public Service Commissions of the First and Second Districts, respectively, not only granted them power to compel the rendering of adequate service to the public, but also clothed them with authority to approve or reject proposed issues of stocks and bonds. In the ten years following 1907, the New York Commissions accomplished a vast amount of pioneer work with the aim of securing as conservative capitalizations as were possible in the face of the chaotic conditions with which they were confronted, to the end that the investing public might be protected without the necessity of exploiting the consuming public either through the furnishing of inadequate service or the charging of exorbitant rates.

The principles worked out by the Commissions during this period, and subsequently upheld or modified by the courts, make an interesting study both from the standpoint of governmental authority and of investment protection. In the further elaboration of sound governmental control of security-issues, which recent experience has shown to be so necessary for all parties concerned, these principles will be regarded as among the most valuable precedents available.

Hayes, Edward Cary. *Sociology and Ethics*. Pp. viii, 354. Price, $3.00 net. New York: D. Appleton and Company, 1921.

This book may be said to be a footnote to a paragraph in the author's *Introduction to Sociology*, published five years ago, in

which he wrote (page 4): "Sociology aims at nothing less than the transfer of ethics from the domain of speculative philosophy to the domain of objective science." The book is essentially a plea for an objective scientific ethics—for a sociology which is an objective scientific ethics.

Ethical theory, according to Dr. Hayes, who is professor of Sociology at the University of Illinois and now president of the American Sociological Society, has passed through the "three stages of progress" of Comte's famous classification. It first had its theological stage, in which the moral law was regarded as the voice of God in the soul of man. Then followed the metaphysical period, with the concept of moral law as an abstraction emanating from the "Ding an Sich." Finally, it is in process of entering the "scientific" stage, in which rightness and goodness of conduct will be determined by scientific study of the realities of life, wherein the values of life will be determined objectively.

It is a thought-provoking book. Sociologists who have emphasized the pure rather than the applied side of their subject will find their practice sharply challenged. Historical ethics is reminded of its a priori assumptions and preoccupations with an abstract individualism. Theologians and moralists, alarmed by the deterministic implications of social science, are reassured, such implications being reconciled in their traditional views. Although the book is marred by a deal of repitition, obviously the result of intermittent effort scattered over a number of years, it is a searching but optimistic analysis that will repay careful perusal.

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Barker, J. Ellis: *Modern Germany, Her Political and Economic Problems.* Pp. vii, 496. Price, $6.00. E. P. Dutton & Co., 1921.

This is the sixth edition "entirely rewritten and very greatly enlarged." The writer is a widely known and very able authority, whose writings in the leading British journals have attracted wide attention. In this edition he had condensed much that appeared in earlier editions and included seven new chapters.

Lippincott, Isaac: Economic Development of the United States. Pp. xvi, 691. Price, $3.50. New York: D. Appleton and Company, 1921.

One of the greatest needs of American students has been for a suitable economic history of the United States. Perhaps time is necessary for the scholars of any country to produce such a work because of all that is involved. At any rate, for that reason or for some other, there has been a dearth of satisfactory studies. Even the monographic literature has been comparatively meager.

Professor Lippincott has taken a great step in advance in his treatment. As he observes in the introduction, he has not limited himself to a mere record of industrial progress, but has endeavored to bring together causes and results. After an introductory section on factors in economic development, the treatment is by periods through 1914 with a concluding chapter on the war period from 1914 to 1920. Emphasis is well distributed over the different periods and a common defect of such studies—over-emphasis on the earlier years—seems to have been avoided. The distribution of space between different phases of development may, however, be more open to criticism. For the period from 1860 to 1914 only two chapters are given to the extractive industries and two to agriculture, a total of 89 pages, while to manufactures and commerce are given eight chapters or 220 pages. We are still nearly fifty per cent a rural population. This fact and the acute problems presented by our rural conditions would seem to warrant a different emphasis.

The volume is the best study yet available, both for private reading and for the class room, and will doubtless find a wide use.

Bowman, Isaiah, Ph. D. *The New World.* Pp. vii, 632. Price, $6.00. New York: World Book Company, 1921.

The past few months have been months of intensive education of the American people in affairs international. The conclusion

of the World War with its remaking of maps and its reordering of industries and of markets has made this world a very small one. This book gives a wealth of world facts each citizen should have at his disposal.

The book is a geography replete with maps reliable and up to date; but it is more than a geography. The book is a history in that the important epochs in the historical, industrial, social and racial developments of each of the countries are noted; but it is more than a history: It is a treatise of world-wide industry in that it gives the location and output of coal mines, and iron mines and other natural resources; it locates the world's industries, it outlines the world's waterways, pictures the world's routes for trade, and gives the industrial backbone of every nation. And yet it is more than a book on industry. It is also replete with matters political in their development and social in their origin. And yet it is something more than a source book on the leading social and industrial facts of the nations of the earth. The book is a mine of information as broad as human life itself and this information is concisely put and is accurate in its scholarship. Only one in close touch with the extensive sources of the American Geographical Society, and in close touch with all the information open to government officials preparatory to the many recent world conferences, could have had access to the diversified sources from which the knowledge in this volume has come.

The book discusses the problems of imperial Britain, the political and colonial aims of France, Belgium as the crossroads of Europe, the Italian situation, the democratic drift in Spain, Portugal's colonial policies, transportation and industrial problems of Switzerland, the Scandinavian countries and Holland, the problems of the German people, the national existence of Austria, the new Hungary, the domain of the Czecho-Slovaks, Jugo-Slavia and the Adriatic, the new frontiers of Rumania, the mountaineers of Albania, the reunited Greek lands, the borderlands of Poland, the development of Lithuania, land tenure and trade outlets in Esthonia and Latvia, the geographical setting and the problems of Finland, the ethnic groups of the Russian Empire with the background of the Russian disorder, Constantinople as a European thoroughfare, the Jewish homeland—Palestine, Anatolia—the last remnant of the Turkish Empire, the Transcaucasian peoples, the interests of Persia in their relation to British industry, the unsettled land of the Nomad in inner Asia, the raw materials in the Far East and their control, the expansion of Japan toward the mainland of Asia, the conflict of Chinese and Japanese interests, the Pacific realm and Australia, the past and present status of colonies, the European powers in Africa, boundary disputes in Latin America and the relations between Latin America and the United States.

Such a recital of the contents of the book gives some idea as to its value as a reference book at these times. Not the least valuable part of the book is its carefully prepared bibliography covering each of the points mentioned above and many, many others. In an Appendix is given a list of dates and names of principal treaties and agreements from 1814 to 1920. In addition to the maps are many choice illustrations reflecting the natural and industrial activities of many of the leading countries of the world. The book is a credit not only to the author but to American scholarship in general.

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